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MONTHLY CONSULAR REPORTS.

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JANUARY, 1904.

No. 280.

EXPORTS FROM TOULON TO THE UNITED STATES.

(From United States Consular Agent Jouve, Toulon, France.)

Flower bulbs.—The business outlook is very unsatisfactory this year on account of differences between producers and buyers of flower bulbs, which form the principal article of exportation from Toulon. Last season there was exported to the United States \$127,881 worth of this merchandise. The syndicate of producers formed last year for the purpose of increasing values fixed an arbitrary price of 80 francs (\$15.44) per 1,000 as a minimum for this year for hyacinth bulbs of 12 centimeters (4.7 inches). Buyers, considering that at this price there could be no retail trade at a profit, have thus far remained out of the market. There are no orders from the United States, although at this date (July 18) shipments are usually being made in large quantities.

Immortelles.—The trade in immortelles is about the same as last year, when exports to the United States from Toulon amounted to \$21,067. The winter having been dry and the spring rainy, the crop will be better than usual.

Bauxite ore.—Bauxite ore is one of the articles of export to the United States from this district. It goes to Boston and Philadelphia. It varies from white to dark brown and the proportion of aluminum runs from 55 to 75 per cent.

BENJAMIN A. JOUVE,
Consular Agent.

TOULON, FRANCE, *July 18, 1903.*

No 280—03—I

OUTLOOK FOR AMERICAN TRADE IN GERMANY.

(From United States Consul McKellip, Magdeburg, Germany.)

HOW TO WIN TRADE.

Numerous inquiries have come to this consulate from persons and firms in various sections of the United States as to the opportunity for trade in this market and the best methods to be applied for the introduction of American goods. The names of many firms in different lines of business have been supplied, in response to such requests, and circulars, when received, have been freely distributed. It is, however, a fact that circulars printed in English have but little effect. Comparatively few dealers here read or understand English. The Germans are essentially a conservative people, and are not likely to change long-established methods unless it is clearly shown to be to their advantage to do so, and this must be established by practical illustration—cheapness, combined with superior quality, being the important factors. Attempts to introduce American goods into this market by means of circulars printed in English meet with little, if any, success. The most effective way to reach the people here is by means of reliable agents or salesmen, who are familiar with the language and to some extent with the habits and wants of the people. Patience and perseverance, with tact and good humor in commending their wares, and not too much “spread eagleism,” will make for success. While the Germans are slow to make new departures they are so eminently practical that, when convinced of the superior quality, utility, and cheapness of an article, they do not hesitate to adopt it, and then the manufacturers produce an imitation of it for home consumption and put it upon the market as the genuine American article.

AMERICAN SHOES.

There is no question about the increasing popularity of the broad-toed American shoe over the narrow and unsightly pointed German shoe. While there is no place in Magdeburg where distinctly American-made shoes are sold, evidence is not wanting as to the way in which the style is being adopted. In some of the larger shoe stores one or two samples are exhibited under the name of American shoes, but on inspection they invariably turn out to be imitations, and fairly good ones, too, but they lack the style and finish of those made in the United States. The Germans are exceedingly sensitive on the shoe question, and are exerting themselves to forestall American shoes by introducing American-made ones

themselves. I have no doubt that a good trade may be done in our shoes, provided they are well made out of the best materials and put upon the market at or about the same price as the home-made article, which is generally higher in price than the American shoe in the United States. The remarks under "How to win trade" in regard to effecting sales here apply particularly when it comes to the introduction of the American shoe. In this line of industry the Germans are fierce competitors among themselves, and to compete successfully with them would require superiority in quality, cheapness, style, and finish of the American over the German shoe.

AMERICAN LARD AND BACON.

In comparison with that of the previous year, the importation of American bacon last year into this district was only one-half as large, and the prices were high during the entire year. American lard was also scarce and the price high.

AMERICAN GRAIN.

Wheat.—The trade in the domestic product was poor, and better profits could be made in foreign grain. The sales in general were not so large as in the previous year. The assertion that foreign grain can be dispensed with is contradicted flatly by the owners of mills and breweries, the former paying for the glutinous foreign wheat from \$5 to \$6 more per ton than for the domestic wheat.

On account of the rainy weather in July, August, and September the crop was late and small, so that many of the mills were obliged to stop work. For these reasons there were large purchases made of Russian and American rye, of American wheat, and of Roumanian and Austrian barley. The hard winter (Kansas) wheat, which is so popular with the local millers, was very fine in 1901, but in 1902 showed that the American farms had also suffered. However, the American spring wheat is magnificent and, in the opinion of the local authorities on the subject, well worth the high price paid for it. Argentine furnished very little wheat to this district during the past year. Domestic wheat touched its highest price—\$41.40 per metric ton (2,204.6 pounds)—on April 30, 1902, and fell to \$37.13 on August 30. Foreign wheat reached its highest price—\$42.36—in March, fell to \$37.84 in October, and rose to \$40 by December, 1902.

Maize.—During the past year the importation of American maize was very small. Mixed maize brought \$32.37 per metric ton in January, 1902; rose to \$35.93 March 29 and again in October; and sank to \$31.41 December 30.

AMERICAN FRUIT.

The importation of American plums into this district increases from year to year on account of the fact that this fruit keeps so well; but this is also responsible for the fact that the growers in Bosnia and Servia are making greater endeavors to export fine, lasting fruit, as otherwise, with large crops in California, they would scarcely be able to sell their plums in Germany.

The good crop of California apricots in 1902 brought with it comparatively low prices, and much larger quantities were imported than in 1901. The price ran from \$17 to \$20, according to quality, for 100 kilograms (220 pounds) c. i. f. Hamburg.

AMERICAN RADIATOR COMPANY.

In my report of last year mention was made of an American company which was then constructing large buildings at Schoenebeck, a town of 20,000 inhabitants situated on the River Elbe and distant twenty minutes by railroad from Magdeburg. Under the name of the National Radiator Company it has been incorporated under the laws of Germany, and in combination with German capitalists has acquired and taken over all the rights of the American Radiator Company in the Empire. The plant is a very extensive one, employing, at this time, 500 men in the manufacture of radiators and boilers. The business in all its details is conducted as far as possible in accordance with American up-to-date methods. Many conveniences and comforts for their workmen, unknown in other factories here, are provided and yet they have had some difficulty in getting along smoothly with the men and have had to encounter a strike, which, however, was so summarily dealt with by the authorities that it was soon ended. The primitive methods of heating buildings generally prevailing throughout Germany should give to this company a fruitful field for its operations, and there is no doubt that it will be taken advantage of to the fullest extent.

WAGES.

The working-day is ten hours and the output of the factory is very large. Wages are much less than are paid in the United States for similar work.

The average wages paid to workmen in this city are 36 pfennigs per hour, equal to 9 cents in United States currency. This estimate is made from data furnished by the Handwerkskammer (chamber of handicraft) of this city and is based upon the amount of wages paid in 78 different kinds of employment, embracing gas fitters, coppersmiths, opticians, and masons, who receive 50 pfennigs, equal to 12 cents, an hour; bookbinders, glaziers, shoemakers, barbers,

and gardeners, who receive the lowest wages, 25 pfennigs, equal to about 6 cents, an hour. These wages do not include board. Ten hours generally constitute a day's work, although frequently longer hours are the rule.

The president of the chamber of handicraft, in his letter accompanying the statement furnished me, calls attention to the fact that the wages vary greatly according to supply and demand, and he therefore gives the average wage as nearly as possible. I think it may be said that owing to the large number of buildings in course of erection in this city the average of wages is higher than usually prevails.

WILLIAM MCKELLIP, *Consul*.

MAGDEBURG, GERMANY, *September 1, 1903.*

CANADIAN TRADE RELATIONS WITH ENGLAND AND THE UNITED STATES.

(*From United States Consul Culver, London, Canada.*)

The prosperity of the Dominion of Canada continues unabated, the present year being undoubtedly the most prosperous in her history. She is succeeding in establishing a rapidly increasing export trade with the mother country, and while she yet feels the need of our markets in many lines, her natural products are finding a ready sale in Great Britain and the people are hopeful that this outlet will be a constantly growing one.

As her exports to Great Britain increase and her trade expands, the desire for reciprocal trade relation with the United States diminishes, and naturally so. Canadians realize that they are much more in evidence in the mother country than ever before; that they are better and more favorably known; that the possibilities of their great natural resources are more widely understood; that they exert a greater influence in the economic realm of the Empire; and all this makes the people exuberantly hopeful that in the near future they may be supplying the British market with the great bulk of the food products it may require.

The increase in exports of food products since 1897 is shown by the following figures:

Year.	Fish and fisheries.	Animals and their prod- ucts.	Agricultural products.
1897.....	\$4,366,081	\$33,600,891	\$13,507,342
1898.....	4,822,688	39,737,089	27,747,140
1899.....	3,610,972	41,604,999	18,447,543
1900.....	4,071,136	49,881,630	21,674,965
1901.....	3,113,306	49,186,025	17,337,633
1902.....	6,374,877	52,687,908	27,973,503

The opposing sentiment among the Canadian people on the question of reciprocity with the United States is expressed in the following article, which appeared in the *Canadian Manufacturer* of recent date, being a reply to the statement of Eugene N. Foss, of Boston, that he regarded reciprocity with Canada as the most important field for negotiation, and that its realization is essential to the highest prosperity of both countries and is inevitable:

Mr. Foss is an optimist, who looks only through the glasses of his own desires, and does not seem to consider that it requires two to make a bargain. He does not take Canada into the account at all, and considers that when those who may be of his way of thinking obtain control of the political power of the United States and are prepared to offer terms to Canada that Canada will accept them, of course. He says that in his missionary journeyings along the border States he had not encountered any American manufacturer who was not in favor of reciprocity. Of course they are in favor of it. Having control of their home market, they desire to sell their surplus products abroad; and what country is there which presents such a favorable market for American manufactures as Canada? Canada is a generous purchaser of American goods; but Mr. Foss should remember, and no doubt does, that Canada is also a manufacturer of such goods, and that Canadians desire to build up and maintain their own manufacturing industries. Canadian manufacturers have become a power in this land; but Mr. Foss does not seem to realize that before any measure of reciprocity that his party could offer would be accepted by Canada the views of the Canadian people would have to undergo a great change. He should carefully read the addresses and speeches of Mr. Drummond, president of the Canadian Manufacturers' Association, and other manufacturers, delivered at the recent meeting of the association, wherein he will discover that the sentiments of the members are strongly averse to anything that savors of reciprocity; and without doubt these expressions accord with the sentiments of a large majority of the people of Canada.

It may be well that the propaganda for reciprocity should be pushed with the greatest vigor in the United States, not because it would result in the lowering of the Canadian tariff in favor of American goods, but rather to discourage the raising of it to a parity with the American tariff, which would be in accord with the sentiments of Canadian manufacturers.

Yet while Canada is desirous of securing an ever-increasing share of the British market, as conditions now are, she is not prepared to trade her natural products for the manufactured products of the old land. She will not sacrifice her growing and ever-multiplying industries for the sake of securing a permanent outlet for her farm products in Great Britain. She would rather take her chances in the markets of the world. And therefore, whatever economic revolutions occur in the Empire in the near future, it is pretty safe to say that Canada will not further lessen her preferential duties toward the mother country nor lower her tariff on manufactured goods. Under her present tariff she has seen great and extensive establishments spring up in different parts of the Dominion, employing thousands of men. She is witnessing daily the enlargement and extension of old factories and she is reaping the benefit from the investment of millions of American and other foreign capital.

As to the effect of the preferential tariff with Great Britain on the woollen manufactures of Canada, the following article from the issue of the Canadian Manufacturer of October 2 reviews the situation:

The Canadian Associated Press cables an encouraging message from London to the effect that the Scotch woollen manufacturers are of the opinion that Canada's tariff preference has increased and will still further increase their trade with the Dominion. This means that the purses of Scotch manufacturers of woollen goods are being filled with good Canadian money, and that the wants of Scotch operatives are met by the activity in Scotch mills, while the Canadian operatives in Canadian mills are being thrown out of employment and are facing the distresses of the approaching winter with but little hope of relief as a consequence of our foolish and insane preferential tariff.

Mr. Bennett Rosamond, M. P., president of the Rosamond Woollen Company, of Almonte, Ontario, states that the condition of some branches of the Canadian woollen industry has become quite serious. His own mills are being operated only five days in the week, while the mills of the Canadian Woollen Company, at Carleton Place, have been closed. He believes that most of the other mills in Ontario will have to be worked on short time or be shut down. This depression applies particularly to tweeds and worsteds, the trade in which, Mr. Rosamond says, has suffered seriously from British competition. The Auburn Woollen Company, of Peterborough, Ontario, of which Mr. James Kendry, M. P., is president, whose mills have been in active operation for twenty-five years, are experiencing the same depression and will, we are told, suspend operations at an early day. This condition exists also at the Hawthorne and the Gillies mills; and the Excelsior Woollen Mills, at Montreal, will, it is stated, close down in a short time.

Mr. George Davidson, secretary of the Canada Woollen Mills Company, says that the company's two mills at Hespeler and Waterloo may follow suit. He understands that other mills are running short time. He thinks the government should take prompt action to nurse the industry back into shape again. The closing of the mills may bring the government to its senses in this matter. The preference to the British manufacturer must cease if the woollen trade is to be saved from serious loss. Mr. Davidson can see no other remedy for the depression but the raising of the preferential barrier.

The outlook is gloomy. Canadian manufacturers are menaced by conditions that make it profitable for British woollen manufacturers to dump their goods on Canada at prices which the home industries simply can not meet. Canada is being used as a slaughter market. The result may be satisfactory to British manufacturers who find a diminished demand in their own market, but it will be ruinous to Canadian industries. The Canadian woollen industry is fighting for its life, and the battle is already more than half lost.

The cry of "Canada for the Canadians" is a familiar and oft-repeated expression, and you see in show windows and at industrial fairs and exhibitions the placard "Made in Canada" attached to the goods on sale or on exhibition. The people are strenuous in their endeavor to make Canada industrially independent, and they are surely going about it in a businesslike way.

HENRY S. CULVER, *Consul.*

LONDON, CANADA, *October 12, 1903.*

CANADIAN TRADE WITH THE UNITED STATES.

(From United States Consul Culver, London, Canada.)

Notwithstanding the strenuous effort to induce the purchase of Canadian goods to the exclusion of the manufactured products of the United States, and despite British preferential tariff duties, the United States is constantly increasing its exports to the Dominion.

The trade statistics show that for the fiscal year ended June 30, 1903, Canada imported from the United States goods amounting to \$137,605,199 and exported to the United States goods to the value of \$71,783,919.

The percentages of the imports of the Dominion from the British Empire and from the United States is given as follows:

Year.	From British Empire.	From United States.
	<i>Per cent.</i>	<i>Per cent.</i>
1882	47.42	42.87
1892	37.94	45.43
1902	26.57	59.98

It is only natural that the trade between the two countries should be extensive. We cultivate similar soil; we draw riches from the same great lakes and rivers; we delve into the same mountain ranges for our minerals; we are very much alike in customs and habits; we have the same system of weights, measures, and money; we have similar methods of keeping accounts and of transacting business—hence our nearness to each other must ever induce extensive trade.

There is no prejudice against American goods as such; they are in evidence everywhere—less, perhaps, in dry goods stores than anywhere else. Our books, papers, and periodicals are on sale in every book store and at every news stand; our drugs, dyes, and chemicals have a very extensive sale, as have also our boots and shoes, hardware of every description, manufactures of rubber, hats, caps, bonnets, paper and manufactures of, wood and manufactures of, and tobacco and manufactures of; while the imports of iron and steel and manufactures of amounted last year to \$25,000,000. A glance at the table of imports from the United States will give the full extent of our trade at present with the Dominion.

IMPORTS INTO CANADA FROM THE UNITED STATES.

The total imports from the United States for the fiscal year ended June 30, 1902, were as follows, the details of the imports for the

fiscal year 1903 (the total of which was \$137,605,199, or \$7,811,052 greater than for 1902) not yet being available:

Article.	Value.	Article.	Value.
Ale, beer, and porter.....	\$30,668	Hops	\$89,196
Animals.....	1,832,777	Hides and skins, etc.....	2,174,764
Asphaltum, or asphalt.....	91,416	Ink, writing and printing.....	118,636
Baking powder.....	83,107	Jewelry	519,403
Books, periodicals, etc.....	1,184,098	Leather and manufactures of.....	1,466,382
Broom corn.....	202,487	Marble and manufactures of.....	102,056
Bricks, tiles, and clays and manu- factures of.....	498,298	Metals:	
Corn, Indian.....	2,770,456	Brass and manufactures of.....	944,052
Barley.....	3,243	Copper and manufactures of.....	1,394,542
Beans	19,849	Gold and silver and manufac- tures of.....	242,700
Oats.....	127,541	Iron and steel and manufactures of	25,167,427
Rye	239,404	Tin and manufactures of.....	593,324
Wheat.....	7,217,137	Zinc and manufactures of.....	56,788
Wheat flour.....	155,408	Lead and manufactures of....	77,738
Other breadstuffs.....	284,412	Other metals, etc., and manufac- tures of.....	1,865,732
Brooms and brushes.....	96,884	Musical instruments.....	320,348
Buttons	86,666	Oils	1,123,950
Candles	80,702	Oilcloth	81,514
Carpets and squares, mats, etc.....	26,665	Optical instruments, etc.....	232,077
Bicycles and tricycles.....	81,246	Packages.....	1,754,229
Carriages, etc.....	1,275,645	Paintings, drawings, etc.....	379,768
Cement.....	588,510	Paints and colors.....	560,461
Clocks and parts of.....	197,948	Paper and manufactures of.....	1,473,666
Coal, coke, and coal dust.....	13,956,942	Pencils, lead.....	63,162
Cocoa beans, etc.....	162,821	Pickles, etc.....	83,904
Coffee.....	130,485	Plants and trees.....	65,697
Cordage and twine.....	1,795,105	Provisions.....	2,466,281
Cotton and manufactures of.....	7,651,447	Rags	91,759
Curtains.....	69,238	Rennet	47,482
Dressing (harness, leather, and shoe)..	54,000	Resin.....	147,603
Drugs, dyes, chemicals, etc.....	3,041,991	Seeds and bulbous roots.....	2,173,034
Earthen and china ware.....	241,135	Settlers' effects.....	3,751,363
Electric apparatus.....	1,350,505	Silk and manufactures of.....	593,795
Fancy goods.....	389,990	Spices	71,829
Fertilizers and manures.....	189,641	Soap	228,350
Fish and fish products.....	486,298	Spirits and wines.....	83,750
Fisheries, articles for use of.....	333,681	Starch.....	38,176
Flax, hemp, and jute and manufac- tures of.....	828,181	Stone and manufactures of.....	250,572
Fruits:		Sugars	573,425
Dried.....	766,133	Molasses	162,039
Green	1,924,176	Sugar candy, etc.....	179,239
Preserved	62,870	Tea	75,320
Furs and manufactures of.....	1,179,318	Tobacco and manufactures of.....	2,105,778
Glass and manufactures of.....	523,820	Trunks, pocketbooks, etc.....	130,635
Gloves and mitts.....	56,117	Turpentine, spirits of.....	311,767
Glue, etc.....	92,389	Varnishes, etc.....	102,547
Grasses, fibers, straw, and manufac- tures of.....	145,695	Potatoes.....	87,970
Grease	361,735	Vegetables, other.....	254,498
Gutta-percha and india rubber and manufactures of.....	2,153,423	Watches and parts of.....	575,654
Gunpowder, explosives, etc.....	307,901	Wood and manufactures of.....	5,656,270
Hair and manufactures of.....	57,085	Wool and manufactures of.....	606,792
Hats, caps, and bonnets.....	1,042,141	Coin and bullion.....	6,062,354
Hay	121,624	Total.....	129,794,147

HENRY S. CULVER, *Consul.*

LONDON, CANADA, *October 12, 1903.*

IMPORTS INTO CANADA FROM THE UNITED STATES AND GREAT BRITAIN.

(From United States Consul Deal, St. John's, Quebec, Canada.)

To show the comparative amount of goods imported into Canada from the United States and Great Britain, I submit the following statement, published by the government at Ottawa, for the year 1902:

Article.	Imported from—	
	Great Britain.	United States.
Breadstuffs.....	\$164,083	\$1,151,320
Carriages, railway.....	1,452	487,890
Carriages, railway, parts of.....	3,209	313,850
Cotton and manufactures of.....	5,076,524	1,582,113
Flax and manufactures of.....	1,781,645	84,189
Furniture	18,357	441,889
Iron and steel and manufactures of:		
Agricultural implements—		
Cultivators.....	29	22,834
Drills, grain.....		50,092
Forks	116	7,700
Harrows	12	36,718
Harvesters.....		900,179
Horseshoes.....		180,658
Mowing machines.....		590,050
Thrashers and separators.....		147,634
Plows	39	214,069
Bar iron and steel.....	214,984	705,137
Castings, rough.....	2,668	195,246
Chains	55,212	156,438
Fittings, pipe.....	968	231,460
Hardware, builders'.....	58,208	593,136
Bridges and parts of.....	153,600	431,477
Locks	7,983	136,984
Machinery, machines, and parts of—		
Ore crushers, etc.....	3,946	48,500
Engines—		
Locomotive		611,925
Steam, and boilers.....	34,998	347,024
Portable		261,188
Portable saws and other similar machines.....	2,750	175,652
Sewing machines and parts of.....	3,389	243,000
Typewriting machines.....	15	129,913
All other machinery not otherwise specified.....	318,338	3,124,135
Scales and balances.....	2,227	99,875
Stoves.....	334	169,670
Enameled ware.....	7,573	131,448
Steel in bars, bands, etc.....	96,447	395,095
Tools, axes, saws, etc.....	17,243	265,086
Tools, hand or machine.....	38,937	544,149
Other manufactures of iron or steel not otherwise specified.....	363,320	1,989,755
Leather and manufactures of.....	261,201	1,468,882
Paper and manufactures of.....	361,692	1,471,789
Wood and manufactures of.....	31,411	911,121

CHARLES DEAL, *Consul.*

ST. JOHN'S, QUEBEC, CANADA, *September 30, 1903.*

AMERICAN MANUFACTURES IN SWITZERLAND.**(From United States Consul Washington, Geneva, Switzerland.)*

Automobiles.—Referring to my report of the 20th of February, 1903,† concerning automobiles and the possibilities of introducing American machines in Switzerland, I have to add that one of the largest American firms making automobiles has, since February of this year, sold about sixty such vehicles in this country. The head agency is, I am told, at Zürich and there is a subagency at Geneva.

There are now two successful automobile manufactories in Switzerland, one in Frauenfeld and the other in Berne; the first has already sold its entire production for the coming year to England.

Boots and shoes.—American boots and shoes are increasing in favor, but it seems that a mistake is made in placing only the better grades on the market. Boots and shoes sold at from 25 to 30 francs (\$4.82 to \$5.79) will not command ready sale, although the merit of the American article is appreciated. The market here calls for a shoe that costs not over 20 francs (\$3.86). I am convinced that if one of our larger manufacturers would open a store here and in other large cities in Switzerland and sell directly from factory to buyer, as is done in so many instances at home, it would be a successful venture.

Furniture.—In furniture, also, there seems to be an opportunity, and we have recently had the representative of an American corporation here investigating the situation.

Transportation charges on American-made furniture from New York to Geneva range at about 40 to 45 francs (\$7.72 to \$8.68) per 220 pounds, and the Swiss duty is 50 francs (\$9.65) per 220 pounds.

HORACE LEE WASHINGTON,

GENEVA, SWITZERLAND, *October 2, 1903.*

Consul.

AMERICAN PRODUCTS IN GERMANY.*(From United States Consul Muench, Plauen, Germany.)***AMERICAN SHOE STORES.**

The plan so often advocated by American consuls in Germany of establishing depots and distributing points in the principal cities of this country for those lines of goods which are not directly sold here through branch establishments seems to have been adopted

* From Consul Washington's annual report on the commerce and industries of his consular district for 1902-3, which will be published in full in *Commercial Relations* for 1903.

† Printed in *CONSULAR REPORTS* No. 272 (May, 1903), p. 73.

with good success. One of the chief advantages of this system lies in the ease with which goods can be furnished at short notice and in the completeness of stock that may thus be carried at the central distributing point. So far as observable here, one of the most successful captors of the German market continues to be the American shoe. In the interest of all concerned it is urged, however, that separate "American shoe stores" be established in every city where the amount of trade justifies that plan. An American shoe placed in the usual German shoe store will have but scant opportunity of being brought to light; nor will such dealer carry a sufficient stock to satisfy even the most modest demands.

AMERICAN TOOLS AND FARMING IMPLEMENTS.

American tools are also forcing recognition from the more progressive mechanics of this country, but if a cheap imitation can be had it is generally chosen. American farming implements—the best in the world—are but rarely encountered in these parts, and when found are usually discovered to be of an old, obsolete pattern. Only when the inexorable law of concentration shall have forced an abandonment of the present system of cultivating small holdings will the advantage of American labor-saving implements become so obvious as to displace the antiquated and cumbersome tools of former centuries.

AMERICAN GRAIN INSPECTION.

Much comment has been recently indulged in by the German press regarding the alleged careless grading of American grain shipped to this country. As trade rivalry between the dealers in the respective countries is keen, it is but natural that any opportunity to draw comparisons between domestic grain and that of a foreign competitor, to the disadvantage of the latter, will be seized upon with avidity. As far as possible, our shippers should look to the sufficiency of domestic inspections, no less than the safety of the vessels that are to carry their grain, and thus avoid ground for criticism.

OUTLOOK FOR AMERICAN TRADE.

Viewing the general condition of our trade with this country, it is apparent that there is no valid reason to anticipate an early decline in its present vitality. The quality of American goods, despite occasional unfriendly criticism by the press, wins new markets year after year, and to the United States the Old World must continue to look mainly for its supply of the great staple products.

HUGO MUENCH, *Consul.*

PLAUEN, GERMANY, *October 12, 1903.*

AMERICAN MANUFACTURES IN BAMBERG.

(From United States Consul Bardel, Bamberg, Germany.)

Of American goods, cotton is the only article which reaches this consular district by direct importation from the United States, all other goods coming by way of Hamburg, Berlin, and Frankfort. Small as the direct trade for American goods seems to be in this district, one can not go into a large manufacturing plant without finding a fair percentage of American machinery, and every up-to-date farmer uses agricultural implements made in the United States; enter a fine office or counting house and one will almost surely find American desks—all the office furniture American, in many cases; while hardware stores handle a number of American tools and household goods.

Much could be done toward increasing the sales of American goods if the different emporiums handling the same were nearer to the consumers. American shoes, although more expensive than those of German make, are well liked on account of their superior shape and workmanship, but few people care to have them sent to them from a distance. The dealers in American shoes at Berlin, Frankfort, and one or two other large cities may be reporting a successful business, but what they sell are fine and high priced goods. It is safe to predict that the dealer in American shoes who can supply the masses in their homes and at fair prices will do a large business.

Sending catalogues and price lists, even the visits of commercial travelers from the United States, can not compare with the establishing of branch houses at easily accessible points. If the American manufacturer wants to sell his goods in Germany to advantage, the goods will, as a rule, have to be where they can be had when wanted. Ordering by sample may be done successfully in a few instances. To make satisfactory sales, the goods must be brought within easy reach of consumers.

Far from being prejudiced against our goods, the Germans give them very fair consideration and do not hesitate to buy them, if, in their judgment, they offer advantages, which in many instances they unquestionably do.

W. BARDEL, *Consul.*

BAMBERG, GERMANY, *September 18, 1903.*

TRADE OF DRESDEN WITH THE UNITED STATES.

(From United States Consul-General Cole, Dresden, Germany.)

The general business depression which began three years ago still continues, but improvement is visible, largely owing to increased exports to the United States, but for which the situation here would have been deplorable. Manufacturers depending on home trade are still working with greatly reduced force or short hours, while some have been compelled to suspend operations entirely. In addition to this the new German tariff, not yet in force, has contributed much toward the cautious, conservative feeling which prevails.

Manufacturers enjoying foreign trade, and particularly with the United States, have had a fairly prosperous year, and this is especially the case with makers of artificial flowers, machinery, paper ornaments and favors, and toys.

The municipal exhibition held in this city from May 1 to September 30 attracted a large number of visitors, who helped the retail trade of Dresden; but the inclement weather prevailing all over the Continent during the past summer has reduced the number of American tourists, who are the best patrons of shopkeepers dealing in souvenirs, pictures, curios, and art objects. The real-estate market is in a deplorable condition and many of the buildings recently erected have passed into the hands of parties holding first mortgages.

The total value of exports declared from this consular district to the United States during the fiscal year ended June 30, 1903, was \$1,603,325.60, an increase of \$212,402.28 over the preceding fiscal year. Artificial flowers, to the value of \$394,361, are first in the list of exports, followed by tobacco (\$332,505) and china and earthen ware (\$132,179).

During the past few months a decided increase in the number and value of orders for goods from the United States is apparent and has encouraged manufacturers to believe that a steady improvement may be looked for, and they all view the situation as more favorable than it was a year ago.

DRESDEN, GERMANY, *October 13, 1903.*

CHARLES L. COLE,
Consul-General.

AMERICAN FRUIT IN ENGLAND.

(From United States Consul Boyle, Liverpool, England.)

The outlook for an increased sale of American fruit on this market for 1903 is very promising, owing to the short supply of European fruit of all descriptions and the absolute failure of the English fruit crop. Last season's (1902-3) imports of American and Canadian apples into Liverpool were the largest since the year 1896-97, the total being 1,396,420 barrels and 74,691 boxes, yet the imports so far during the present season, which opened early in August, 1903, are 111,500 barrels, against 89,500 barrels for the same period last season. Notwithstanding the reports that this season's crops are not to be so large, the receipts in Liverpool thus far are in excess of last year.

On the whole, the condition and quality of the fruit from the United States is satisfactory, but there were instances where the packing was very bad—in fact, some in the trade describe it as dishonest packing, a few large apples being put on the top and at the bottom of each barrel, and in the center of the barrel all sorts of rubbishy apples were placed. If packers will be more particular in grading and packing greater confidence will exist here with buyers and the result will be better prices. Great satisfaction is expressed at the result of the action taken by the Canadian government to prevent fraudulent packing, for by it irresponsible shippers are prevented from operating.

The total import of apples into the United Kingdom for last season (1902-3) was 2,508,193 barrels, of which 1,870,719 barrels came from the United States and 637,474 barrels from Canada.

Already large shipments of apples have come in from Canada. Canadian shippers have been quick to avail themselves of the failure of the fruit crop generally, and particularly the apple crop, in England.

A great many plums have arrived in England this summer from Germany, but there have been many complaints as to their quality.

Spain is getting to be a great source of supply for fruit consumed in this country. Excellent melons, something like American canteloupes, are imported from Spain and can now be bought in Liverpool at prices ranging from 6 to 16 cents.

JAMES BOYLE, *Consul.*

LIVERPOOL, ENGLAND, *October 6, 1903.*

AMERICAN MEATS AND DRIED FRUITS IN GERMANY.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

Protests against the action of police authorities in seizing or forbidding the sale of American dried fruits because they contain an admixture of sulphuric acid are made in the annual reports of many chambers of commerce throughout Germany. The chambers claim that not a single case has occurred where injury resulted from said admixture. On the contrary, it is said it helps to preserve the fruits, which are a popular article of food. The Chamber of Commerce of Mannheim, in conjunction with many other chambers of commerce, addressed the imperial sanitary bureau at Berlin on the subject of "American dried fruits" and the police orders inhibiting their sale. The chamber refutes the allegation that the use of sulphuric acid as a preserving means is injurious, and petitions the sanitary bureau to fix the amount of acid allowable in the preservation of these fruits, which are a necessary article of consumption.

The report of the Mannheim Chamber of Commerce speaks also of the scarcity of the meat supply and the greatly lessened consumption of beef and pork, owing to their high prices forcing the working classes to eat horse flesh.

The report of the chamber of commerce for the State and city of Hamburg says on the subject of the restrictions on the importations of meats that they are Agrarian measures, instituted for the purpose of forcing high prices for domestic meat, and are not justifiable on sanitary grounds. It mentions particularly "corned beef," against which nothing can be alleged as being hurtful to consumers, and it quotes the opinions of experts to show that the small amount of boracic acid used for the preserving of the meat is not injurious and is actually indispensable. The chamber instituted inquiries among the Hamburg shipowners, who said that since foreign canned meats have been used on their vessels the health of the crews has been much improved, but after trial it was found that the canned meat put up in Germany is inferior to the foreign article. The report further expresses the hope that the Federal Government will soon realize the fact that by keeping out cheap foreign meat a serious injury is done to the working classes of Germany and that such injury must create intense feeling and strengthen the Social-Democratic party.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 3, 1903.*

HOW TO INCREASE AMERICAN TRADE IN COLOMBIA.

(From United States Consul-General Snyder, Bogotá, Colombia.)

The United States does not supply as large a share of the imports of Colombia as it takes of her exports.

The reasons for this are hard to explain. One minor reason, however—much in evidence in this country and frequently commented upon by our consuls—is that of packing. Two examples will serve to illustrate this:

There is a great demand in this country for furniture. France supplies the greater part of this, while the rest comes from the United States. There is no doubt that the American manufacturers, owing to their facilities for speedy transportation, could control this trade in a short time if they took the trouble to pack their goods as the French do, but while French furniture arrives in perfect condition American furniture frequently comes in the condition of "match wood."

The other example is that of oatmeal and like cereals, cakes, crackers, etc. There has been a greatly increasing demand for this class of goods in the last year, and our merchants could absolutely control this market with little or no trouble if they would but pack this class of goods in tins. Goods of this character from all other countries come in tins securely packed, while the American goods come in paper and cardboard boxes, with the result that fully 60 per cent thereof reaches this country unfit for use.

The foregoing serve as two of many examples to show reasons tending to keep down our imports into Colombia, and it can be seen that it is not so much what others are doing as what our merchants are not doing, for the tendency here is to go to the United States for desired merchandise, owing to cheapness and the shorter time required; especially is this so in the coast cities. The European merchants study the country and make their merchandise meet the conditions as they find them here, instead of forcing conditions to meet their merchandise.

ALBAN G. SNYDER,
Consul-General.

BOGOTÁ, COLOMBIA, *September 22, 1903.*

No 280—03—2

FRENCH APPLE HARVEST.

(From United States Consul Haynes, Rouen, France.)

This year's apple harvest in France will be unusually short, on account of the late frosts and the ravages of the caterpillar. Prices will be even higher than those of 1902.

In the Province of Brittany as high as \$3.50 was paid per barrel. Bittersweets are at present quoted at 150 francs (\$28.95) per ton.

The apples of this Department (Seine-Inférieure), which last week sold for 170 francs (\$32.81) per ton, are now offered on the Rouen market for 165 francs (\$31.85) and less; this is caused by the entry of foreign fruit. French journals note the increasing importations of American dried apples, which are offered at Havre at 45 francs (\$8.68) per quintal (220.46 pounds), present delivery, and at 40 francs (\$7.72) for December delivery. During last week 900 quintals (198,414 pounds) were discharged at Havre. "This invasion," says the *Agriculture Moderne*, "very materially affects the prices of apples."

The situation seems not only bad for the whole of France, but for all Europe, Spain excepted, her harvest being extraordinarily large. German journals say that the apple crop altogether will be the smallest known. France has already imported 600,000 pesetas' (\$115,800) worth of apples from Spain, and cargoes continue to enter.

Evidently the opportunity for American dried-fruit exporters is at hand, and already some are taking advantage of it in this city.

The principal dried-fruit dealers of Rouen are:

Barthélemy-Coll, 1, Rue St-Lô.

M. Clair, 9, Rue Rollon.

Cossard et Anselin, 13, Rue Racine.

Léon Delmarre, 123, Rue Charrettes.

Vve. Thouret, 9, Place du Vieux-Marché.

M. Faucon, 38, Vieux-Palais.

THORNWELL HAYNES, *Consul*.

ROUEN, FRANCE, *October 14, 1903.*

AMERICAN TRADE IN BRITISH INDIA.

(From United States Consul Fee, Bombay, India.)

While the native is favorable toward things American, and will buy where he can get the cheapest (cheapness seems to be more attractive than quality), in most instances he is controlled in one way or another by British influence.

The great railways and steamship lines that carry the traffic are under control of the government; the importing houses are largely English, and the official influence, a power in itself, is, of course, British.

In later days the lines of colonial trade have been materially tightened and everything possible is naturally thrown to the mother country.

The British Indian tariff duty is quite low, averaging 5 per cent ad valorem. All machinery worked by electric, steam, water, or other power, except manual labor, is free of duty. •

In view of the little effort made to sell American goods in India, one is surprised that we sell as much as we do; our goods are practically selling on their own merit. American agencies and branch houses, under American management, in India can be numbered on the fingers of one hand; while Germany numbers her commercial houses, under the management of well-trained staffs, by dozens, and "made in Germany" has become a byword.

Germany, France, Austria, and Italy have lines of steamships running to this port and the East.

For more than a century England has taken the bulk of India's raw products, and in turn has sold her large quantities of British manufactured goods, thereby greatly aiding in building up her mighty commerce, as well as enriching her home people. American general trade with India is, however, gradually increasing, though the total amount in value has not changed greatly in the past five years. In 1899, when exports from the United States to India were exceptionally large, mineral oil formed the great bulk of the exports. During the last few years, however, there has been a great falling off in oil importations into this country from the United States. Notwithstanding this big decline, the aggregate of American importations into India did not decline, as the decrease in oil has been substantially counterbalanced by large importations of manufactured products.

Five years ago kerosene oil formed over one-half of the amount of our total sales at Bombay. Since then American kerosene has gradually lost the market here. Russian and Burmese oil, being cheaper, though inferior in quality, has been able to successfully meet the competition of the Standard Oil Company, so that during the last year the Standard Oil Company entered at this port only one-thirtieth of its imports of five years ago. It therefore speaks well for American trade to be able to say that other American products and manufactures have so increased in their sales that the general average of our total sales remained nearly the same.

We should, however, sell India much more than we do, and would,

did we make it a business to do so. We should not expect the representatives of other countries handling competing lines of goods to take much interest in pushing our goods.

In order to increase our trade, there are several ways that suggest themselves; but the one way that appeals to me perhaps more than any other is to establish American branch houses under American management, place reliable and capable agents in the field, and then conform to the demands of the trade.

First study the field; if that is found inviting, come to stay, and not merely to relieve overproduction at home or until home markets are more favorable. The American manufacturers who are selling goods successfully in India are those who have placed their agents and branch houses here permanently.

The American bicycle has been on the market for some years and is quite popular. The American automobile is considerably in demand and should meet with a good trade, because it is more reasonable in price and neater and freer from noise than the machines offered by manufacturers of other countries.

The American sewing machine and clock are great favorites. The man who establishes an American shoe store in Bombay, handling exclusively American shoes, has a fortune assured him; especially if he comes before the Germans have adopted the American last and have flooded the market with an American shoe "made in Germany."

WM. THOS. FEE, *Consul*.

BOMBAY, INDIA, *July 17, 1903.*

EXPORTS FROM THE UNITED STATES TO THE BRITISH EAST INDIES.

The following table, compiled in the Bureau of Statistics, Department of Commerce and Labor, shows the exports of the United States to the British East Indies for the years indicated:

Domestic exports.	1892.	1895.	1899.	1901.	1902.
Cotton and manufactures of:					
Unmanufactured .....pounds.....			4,428	172,322	76,642
Manufactures of (cloths)....yards...	5,245,569	5,738,928	5,547,691	8,217,142	10,303,137
Iron and steel, manufactures of:					
Rails for railways (steel).....tons.....			9,184	25,458	3,206
Structural iron and steel.....do.....			3,569	5,041	551
Locomotives .....number.....		3	36	8	10
Oil (mineral), refined.....gallons...	37,132,309	31,633,812	24,469,724	16,655,998	14,869,366
Books, maps, engravings, etc.....	\$7,802	\$11,576	\$22,118	\$25,408	\$32,762
Breadstuffs.....	6,529	26,018	20,330	12,458	18,115
Cars, carriages, etc., and parts of:					
Cycles and parts of.....			142,301	61,856	54,939
All other.....	3,835	8,272	15,001	39,407	22,002
Chemicals, drugs, dyes, and medicines..	29,266	27,416	82,297	83,198	103,315
Clocks and watches and parts of.....	44,733	31,752	78,517	103,776	93,533

Domestic exports.	1892.	1895.	1899.	1901.	1902.
Cotton and manufactures of:					
Unmanufactured.....			\$308	\$16,100	\$6,493
Manufactures of—					
Cloths.....	\$325,230	\$282,278	266,405	432,040	569,293
All other.....	913	1,828	2,386	3,969	8,431
Instruments for scientific purposes.....	1,226	3,197	54,762	406,639	115,308
Iron and steel and manufactures of:					
Rails for railways (steel).....			184,122	720,951	82,387
Structural iron and steel.....			102,649	181,563	19,055
Builders' hardware, etc.....	8,407	11,976	41,639	104,373	77,167
Locomotives		19,250	408,950	103,619	72,500
Machinery	22,430	25,263	198,404	565,132	480,486
Pipes and fittings.....			187,347	252,825	215,340
All other manufactures.....	7,736	12,150	55,347	421,336	197,451
Lamps, chandeliers, etc.....	19,522	15,079	23,837	49,493	41,751
Leather and manufactures of.....	1,719	1,695	27,983	28,626	45,380
Malt liquors.....	615		8,665	10,662	17,203
Naval stores.....	5,554	3,612	13,147	24,355	34,708
Oils (mineral), refined.....	2,969,638	2,207,849	1,800,419	1,681,530	1,437,696
Perfumery and cosmetics.....	2,963	4,771	21,061	17,310	23,535
Provisions, comprising meat and dairy products	6,613	6,933	77,430	170,409	88,970
Tobacco, manufactures of.....	129,010	85,501	246,017	310,663	349,993
Wood and manufactures of.....	30,615	14,017	30,691	56,403	32,633
All other articles.....	49,785	51,402	226,596	364,307	390,537
Total domestic exports.....	3,674,141	2,851,835	4,338,819	6,248,408	4,620,983
Total foreign exports.....	166	2,106	3,117	3,396	893
Total exports of merchandise.....	3,674,307	2,853,941	4,341,936	6,251,804	4,621,876

The total exports for 1903 were:

Domestic.....	\$4, 738, 067
Foreign	1, 000
Total.....	4, 739, 067

The details by articles are not yet available for 1903.

AMERICAN SHOES IN VIENNA.

(From United States Consul-General Rublee, Vienna, Austria.)

The opening within a few weeks of a large retail shoe store in the center of Vienna's shopping district where only American-made shoes will be sold is a significant tribute to the superiority of American shoes. Shoemaking is one of the Austrian industries which has always flourished and which enjoys a considerable export trade. Sales of American shoes in the Austrian market have, therefore, met with many difficulties, and there has been until recently a more or less general belief among Austrians that competition with the Austrian product in the home market could not be successful, both on

account of the good quality and the cheapness of the home-made shoes. Besides, public opinion and Government influence favor protecting the home industry. The growing demand for American-made shoes which has now resulted in the establishment of a shoe store in which American shoes are to be sold exclusively proves conclusively, however, that American foot gear has made its way into public favor strictly on its merits, and that the trade is likely to have a steady increase in the future.

American shoes have been sold in Vienna during the last few years in small quantities with gradually increasing success, being handled by a number of stores side by side with Austrian shoes; but up to the present time there has been no store where there was a large stock to select from, and the test of the market has, therefore, not been wholly satisfactory. The project to do business on a larger scale has been undertaken by the proprietors of a leading Viennese shoe store who have during the last two years bought small consignments of American shoes experimentally. They have now become satisfied that there is a permanent and growing demand for these shoes that warrants catering to the wants of Viennese buyers on a more extensive scale, and they have decided to open a separate store, to be known as the American Shoe Store of Vienna. A large store has been rented for this purpose, and the first order to American manufacturers is for 3,000 pairs of shoes. The men back of this enterprise are successful Viennese dealers in shoes, thoroughly in touch with the market, and they consider the success of their new venture assured. Their customers to whom they have sold American shoes are so pleased that they will never again wear shoes of any other make.

American shoes impress Austrian buyers as possessing far greater durability, superior comfort, and better workmanship. They are more expensive than the Austrian article, but customers are satisfied to pay more, as they consider them worth more. The Austrian shoes, though handmade, are admittedly inferior to the American machine-made shoes.

It is interesting in this connection to note that Austrian manufacturers have sought to imitate American methods, having imported American shoe-making machinery, but they have been unable even by this means to produce shoes equal in quality to those made in the United States.

W. A. RUBLEE, *Consul-General*.

VIENNA, AUSTRIA, *September 21, 1903.*

OPPORTUNITIES FOR AMERICAN TRADE AND ENTERPRISE IN LIBERIA.

(From United States Charge d'Affaires Spurgeon, Monrovia, Liberia.)

Owing to the absence of direct steam communication between the United States and Liberia the trade between the two countries is practically nil as compared with the trade between Liberia and Great Britain, Germany, France, and Holland.

Liberia produces many articles similar to those which the United States imports in large quantities, viz, coffee, palm oil, camwood, ginger, cacao, and piassava. There are great forests of rubber trees in the country, the British concessionnaires controlling the industry.

The Anglo-African Argus and Gold Coast Globe notes that the palm oil shipped from Liverpool to the United States for the first six months of 1892 represented a total of 5,200 tons, entered at the following ports: New York, 2,595 tons; Boston, 1,243 tons; Newport News, 963 tons; Philadelphia, 385 tons; and Baltimore, 14 tons.

The African League (local journal of Monrovia), commenting on the importation of palm oil into the United States, says:

This shows to what extent West African produce is used in the United States, or at least this particular West African product.

It should be remembered by our friends and merchants in the United States that probably no part of West Africa is more productive of palm oil than Liberia; therefore, if there were direct steamship communication between the United States and Liberia the former would not have to buy through the agency of Liverpool, but it could buy directly of Liberia, shipping it on the Americo-Liberian steamer.

Not only could palm oil be shipped from Liberia to the United States, but thousands of tons of rubber could be shipped from the rubber fields of Liberia to the great ports of America where it is so extensively used. Rubber is a great staple in Liberia and is destined to be one of the greatest exports of the black Republic.

Not only in these, but in her lumber industry is she destined to rank first among the West African states. Her dense forests of mahogany trees of itself make Liberia great in the lumber industry. Besides mahogany, there is a wood in Liberia—a kind of ironwood—of which it is said there is hardly any end to its durability. Another very useful class of timber is the African pine, as also the African gum tree and many other kind of trees useful in the lumber industry. Hence, lumbering in itself will finally form an important industry in Liberia, and her exports along this line will bring large returns of wealth to this nation.

The statement relative to rubber in the foregoing extract is misleading, as an English syndicate has a monopoly of the rubber industry; but the wealth of Liberia in forestry is all and more than the League claims.

A concession for the development of the Liberian lumber industry can be obtained by any substantial American syndicate.

A like opportunity offers for the cultivation of cotton in Liberia. Within the last two or three years the Germans in Togoland and the English in Lagos have been experimenting in cotton growing with good results, and as Liberia is in the same physical belt as Lagos there is no reason why similar results should not be obtained from like efforts. The natives have, from time immemorial, raised cotton and made their own cloth, hence there need not be any "experiment" outlay.

Liberia just now holds the attention of the mining world. While the American capitalist and mining investor has lost much by inactivity and lack of interest in the known mineral resources of this Republic, there are yet profitable fields left open to investment.

Not only gold, silver, copper, tin, coal, and iron are found in Liberia, but diamonds have recently been discovered. The right to prospect and mine in Murtsenado and Maryland counties has been granted to the West African gold concessionnaires of London, but the Bassa and Sinoe counties are as yet unoccupied. By the agreement between the Government of Liberia and the West African concessionnaires there is no close monopoly, as every other plot or block in the territory named is reserved to the Government.

JAMES ROBERT SPURGEON,
 MONROVIA, LIBERIA, *August 15, 1903.* *Chargé d'Affaires.*

THE UNITED STATES THE WORLD'S EDUCATOR.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

Not only in political and international law, but in the realms of science, mechanics, economics, and business methods, the United States is becoming the high school for the other nations of the world.

This is shown by the numerous agricultural and commercial commissions, experts in manufacturing, students of political economy, scientists, ministers of state and chiefs of governmental bureaus, managers of industrial concerns, banks, etc.—all from the highly cultured European countries—visiting the United States for the sole purpose of studying American working methods.

With far-seeing men in Europe it has become a matter of firm belief that it is strictly essential to study American ways, means, and methods before the education of higher craftsmen or managers of industrial or public works, etc., can be called complete.

The statements which Mr. Goldberger, Dr. Salamansohn, and other chiefs of great German financial institutions; Wilhelm von

Polenz, the author; Minister of State von Rheinbaben and his accompanying counselors and experts, have made, and which were published by the press and discussed at meetings of economic bodies in Germany, caused deep interest in that country and in all industrial circles of Europe. As a result, numerous visits from other experts, bankers, managers, and scientists are to follow, all with the same aim: "To study the United States; to see how the Americans do it."

Three of the most prominent men of German finance and mechanical science are now proceeding to the United States for this purpose. They are Director Dernburg, of the Bank of Commerce and Industries; Director Winterfeld, of the Berlin Commercial Company; and Privy Councilor von Rathenau. The two first named represent great banking and promoting institutions, and Mr. Rathenau is director-general of the greatest electrical works in Germany.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *September 25, 1903.*

OUTLOOK FOR AMERICAN TRADE IN BULGARIA.

Mr. John B. Jackson, United States minister to Greece, Roumania, and Servia and also diplomatic agent in Bulgaria, sends the Department of State, under date of September 24, 1903, the following information relative to trade relations with the United States:

At present essence of roses is almost the only article exported to the United States from Bulgaria, and agricultural machines are almost the only direct imports from the United States.

Recently, Bulgaria has been doing a great deal to develop its Black Sea ports at Varna and Bourgas, and new railway connections have been made between the interior and certain ports on the Danube. Bulgaria has considerable mineral resources, and there are quantities of coal of very good quality near Tirnova. With proper development of the mines this coal could easily compete with the English and other coal which finds a market in large quantities at points on the Danube.

In spite of the fact that foreign capital is greatly needed, foreign companies have not received liberal treatment, and persons wishing to obtain concessions should be very careful in ascertaining the exact conditions, not only as to how they may carry on the enterprise in question, but with regard to the possible withdrawal of the concession itself.

It has long been the wish of the Bulgarian Government to establish closer commercial relations with the United States, and the Prince of Bulgaria has expressed the belief that Americans could do a great deal toward the industrial development of his country, and that a market there could be found for many American products.

MARKET FOR ROPE IN CHINA.

(From United States Consul Miller, Niuchwang, China.)

There were 20,000 Chinese junks registered at Niuchwang last year. This is only a very small percentage of the number in China. In this section all of these junks use sails made of American cotton goods. An effort is being made to furnish the rope for them from the United States. The rope used thus far was made here from hemp raised in Manchuria. It is badly made, is quite inferior, and does not wear well—usually one season.

The seagoing junks use great quantities of rope, especially of large sizes, instead of anchor chains. This is made from some of the palms raised in southern China and the manufacturing of the rope is done also in the south by the men who navigate the boats. Inquiries there as to the cost of it will show the possibilities of competition for that trade.

The fact that considerable quantities of American rope are being ordered for Manchuria—some for Chinese junks—indicates the possibilities of a trade in this line. If sales can be established throughout North China they may grow to wonderful proportions, for the amounts used and the number of boats are surprisingly large.

If, in addition, it would be possible to get a part of the rope trade of southern and central China, the volume would be sufficient to keep several large plants in operation. The simple fact that competition is against Chinese production need not necessarily signify that the business is impossible, for the strongest competitor of American cloth for the sails of these same boats is cotton cloth made from cotton produced in China.

The great bulk of transportation in China is by water, and no country in the world is using so many sailboats as is China; all of these use considerable rope. This trade would not use high-class and high-priced articles. Our cheapest and poorest rope is so much better than those in general use that they may possibly supplant them.

The enormous quantity used and the possibilities of a great trade if the market can be secured at all is sufficient inducement for thorough investigation.

In China rope is made from grass, hemp, jute, palm, and bamboo.

MANILA ROPE.

Manila ropes have been tried in this climate, but the extreme dryness of the air during the fall, winter, and spring, covering so long a period, shrinks and breaks the fiber and makes it worthless. Gunboats going into winter quarters here have found all of their ropes worthless in the spring and unable to bear any strain.

The seagoing junks use the large rope made of a species of palm, and the junk men take these ropes apart and work them over every two years.

SIZES AND PRICES.

The river junks here use hemp ropes varying in size from one-fourth of an inch to 1 inch in diameter. Price is 23 cents Mexican (9.6 cents) per catty ($1\frac{1}{3}$ pounds). They also use a jute rope, mostly $1\frac{1}{4}$ inches in diameter, for their anchor rope; this sells for 11 cents Mexican (5.4 cents) per catty.

The superior quality and longer life of American rope may appeal to these people. If samples and prices are sent to this consulate, I will gladly give the matter attention and endeavor to introduce it.

HENRY B. MILLER, *Consul*.

NIUCHWANG, CHINA, *August 18, 1903.*

ADVICE TO FIRMS EXPORTING TO THE PHILIPPINES.

The following article, taken from the Manila Daily Bulletin of recent date, may be of interest to United States exporters:

Catalogues should be in Spanish, and should always give the telegraphic addresses and codes employed. Prices should be given. Confidential discount sheets should give the prices current; the importer then can judge prices from his own commercial journals. Weights and dimensions of articles are of great value in a catalogue.

The reputation of a house often depends upon the manner of packing as much as on the merchandise itself. Goods for Manila should be packed with special care. The port is unprotected and the sea is often very rough, making unloading at such times impossible. Transfer is made by natives in small boats from a point 2 miles distant. These boats are tossed about by the slightest agitation of the water.

Documents ought to accompany the merchandise. Firms should choose for their representatives persons of great experience. The customs officials of Manila are guided by fixed laws, from which they do not deviate. The Philippine tariff laws in regard to the different classifications should be carefully studied, and persons should draw up their documents in accordance therewith. Manufacturers should not place small samples in their shipments unless they mention them as such in their invoices, otherwise they will be compelled to pay duty thereon, and, perhaps, an additional amount.

Every package should bear the name of its destination and its particular marks, and should also show gross and net weight in pounds and kilograms.

Invoices should be prepared in regular form. Some important rules of the Philippine customs service follow:

1. Each package should be specified in the invoice, with marks and numbers.
2. The contents of each package should be indicated in detail, in regard to price and destination.
3. Packages containing goods of different classification should be so entered.
4. The weight declared should include the wrapper, since the wrapper pays the same duty as its contents.
5. As the wrapper is destroyed, the invoice should show net and gross weight.
6. Invoices should always be made in triplicate, two for the customs and the third for consignee.

If bills of lading are not payable at sight, a second but nonnegotiable bill should follow, in order to give the consignee information as to freight.

It is preferable to insure in companies having legal representatives in Manila.

AMERICAN CIDER AND CIDER VINEGAR IN ENGLAND.

(From United States Consul Halstead, Birmingham, England.)

CIDER FOR ENGLISH CONSUMPTION.

Owing to the unusual summer season, there was practically no apple crop in Great Britain, and as there has been in recent years a great increase in the consumption of cider in England many cider makers with established trade will be compelled this year to draw upon foreign cider makers or will have to import apples or apple rings in great quantities. Those purchasing foreign cider will wish to refine it here.

A cider maker tells me that ten or twelve years ago there was a good deal of American cider imported into this district, and that the American methods of preparing it were then, he admits, superior to English methods. Some of this American cider had, he says, owing to the fact that it was shipped in barrels which had formerly held rye whisky, a flavor which was very much liked. British cider makers, he claims, have to-day not only learned all the American methods for cider perfection, but have improved on these processes so much they believe they now prepare cider better than the Americans do, and that this is proven by the decrease in consumption here of the American cider and the increase in the consumption of English cider. At any rate, the English maintain that if they do produce a better cider it is a cider better suited to English taste, most of the American cider is of too light a quality. The English cider has greater body than the American, and English cider drinkers want a very heavy cider, just as English beer drinkers want

heavy beer. The great necessity, therefore, in shipping cider to this country will be to send a cider which has great body and which is so far free from foreign matter that fermentation will not be started while in transit.

I had a caller the other day—a cider maker—who wished to know whether it was at all likely that there was in the United States to-day any cider of good body a year old. He said he could use such cider, and I will place before him any cider proposition I receive as a result of this announcement.

CIDER VINEGAR.

To Americans visiting England it is a surprise to find that cider vinegar is not used here, malt vinegar being in general use, and it is malt vinegar, so it is claimed here, that preserves in such hard, firm shape the sour pickles made in England. I can not say that cider vinegar is not used in some sections of England, but usually if you mention cider vinegar to people they express surprise that anyone should use it, and even the cider maker who called on me the other day said his firm did not make cider vinegar for sale, but if they had a little cider that had fermented he used the vinegar at his own house. I wrote last year to a Birmingham gentleman, who owns a large farm in Herefordshire and always has delicious cider at his home made from his own apples, concerning cider vinegar, but he had never heard of such vinegar and referred me to a firm of cider makers in Herefordshire. When I wrote to this firm I asked why so little cider vinegar was used in England. The member of the firm who replied to me said that he "had used cider vinegar in his own house for many years, considering it superior for salads and fancy cookery to any of the malt products obtainable, but did not know why cider vinegar had not been made in England;" adding, "It is true, crab vinegar is found on farms, but this is, strictly speaking, malic acid, natural to the crab apple, and not a vinegar made by acidifying alcohol and cider." He also sent me a circular offering cider vinegar, which by a strange coincidence he had just issued and proposed to distribute among his customers "as a tentative measure to see how it would go."

MARSHAL HALSTEAD, *Consul*.

BIRMINGHAM, ENGLAND, *September 29, 1903.*

NORWEGIAN-AMERICAN TRADE.

(From United States Consul-General Bordewich, Christiania, Norway.)

DIRECT IMPORTS FROM THE UNITED STATES.

The direct imports into Norway during the last five years w as follows:

1898.....	\$3, 836,
1899.....	5, 172,
1900.....	4, 575,
1901.....	4, 850,
1902.....	3, 332,

The only goods entered as imports from the United States at Norwegian customs are those arriving direct from New York or Boston in the Scandinavian-American Line steamers. The custom-house officers give returns to the Norwegian statistical central bureau and the latter gives them publicity in its *Tabeller vedkommende Norges Handel*, which is published annually. What portion of the large amount of American goods imported into Norway covered by these figures it is impossible to learn, but from careful observation and from conversation with merchants I am of opinion that considerably less than one-half the American goods actually imported are credited to the United States. All goods assigned to Norwegian merchants by American firms and coming transshipped via Germany, Denmark, or England are entered at the Norwegian custom-house officers as goods imported from the country from which they last came, and not as coming from the country of origin. Great quantities of American goods arrive in that way every day from Hamburg, Copenhagen, and Hull.

It is also a fact that some of the American exporters, failing to find suitable business connections in Norway, have concluded to dispose of their goods in the European markets generally only through large importing houses in the business centers, leaving to them the subsequent disposal of the same in the less important markets. Tobaccos, sirups, cotton, sewing machines, tools, boots and shoes, watches and clocks, sporting goods, paper, and a variety of similar articles are largely handled in this manner. I am of the opinion that many of the articles imported into Norway from other countries could be bought in the United States with profit to all concerned.

American salesmen are still strangers in Norway, and too much is expected from the catalogues and trade papers so liberally sent and always distributed by me where they are likely to do the most good. The tax on commercial travelers in Norway remains

same as formerly, 100 kroner (\$26.80) for a thirty days' stay. Thirty days would more than suffice for a visit to the principal towns.

EXPORTS TO THE UNITED STATES.

The exports declared for the United States at the consulates and consular agencies in Norway for the year 1902 and first half of 1903 were as follows:

Article.	1902.	1903.*
Wood pulp.....	\$616,855	\$418,501
Salted mackerel.....	51,586	.....
Hides	21,284	15,804
Cod-liver oil.....	58,312	7,851
Oxalic acid.....	18,594	25,704
Books	17,303	8,730
Other goods.....	96,103	35,333
Total.....	880,037	511,923

* First six months.

HOW TO ENLARGE AMERICAN TRADE IN NORWAY.

Direct American trade with Norway should prevail wherever such trade is possible. Bringing the producer and the consumer face to face saves much cost absorbed by middlemen, transshipments, etc. Where agents for the sale of American goods are employed, they should be strictly confined to the sale of American goods. It is often a delicate matter for consuls to discriminate between the genuine dealers in American goods exclusively—located in Europe—and dealers who handle American goods only when they realize therefrom larger profits than from the sale of other goods. By representing themselves to the consuls as importers and general agents of American goods, located in England, Germany, or other countries, and seeking commercial information from the American consul in this or other countries, they are generally furnished with the information sought; but I have had cases where refusal was found necessary.

Russian crude petroleum is now being imported in increasing quantities to Norway, where it is being rectified in a refinery located near Christiania. Formerly, nearly all petroleum used came from the United States.

American chemicals, drugs, druggists' sundries, and patent medicines have been introduced in this market to some extent. The patent medicines are received with distrust by the medical profession, and strong efforts are being made to have a stringent law passed regarding their importation by the trade and by individuals for private use.

The Norwegian farmers are making considerable progress in the

management of their farms. Rotation of crops is, owing to the light and sandy soil, a necessity even on new land. Much attention is given to stock raising and dairying. The number of hogs has increased very much of late and the importation of pork is decreasing accordingly. The country will never be able to produce enough farm products for home consumption, however; hence, American food products, as well as manufactured articles—according to the needs of the country—will always find a market here. If the consignment system could, with safety to the American sellers, be made easier for the Norwegian buyers, it would greatly facilitate the trade.

HENRY BORDEWICH,

CHRISTIANIA, NORWAY, *October 10, 1903.*

Consul-General

FRANCO-AMERICAN COMMERCIAL RELATIONS

(From United States Consul Skinner, Marseilles, France.)

The commercial relations between France and the United States continue to be thoroughly unsatisfactory, and must so continue as long as imports from the United States are dutiable, with few exceptions, at the maximum rate of the tariff, while competing nations without important exception secure the minimum rate. To this very serious obstacle is added another, in the fact that if American merchandise be exported to France with an intermediate shipment at some European port a penalty tax is added, intended to benefit French shipping. If, however, British, German, or Austrian goods happen to be forwarded over land routes by way of Russia, or any other country the shipper continues to enjoy the minimum tariff rate. Nor is this all. Early in July an amendment to the French tariff law was passed by the national legislature whereby salted meats—large quantities of which (particularly beef) are exported from the United States to France—heretofore dutiable at the uniform rate of 25 francs (\$4.82) per 100 kilograms (22 pounds) under both maximum and minimum schedules, have been made dutiable at the rate of 50 francs (\$9.65) under the maximum schedule and 30 francs (\$5.79) under the minimum schedule, the maximum rate of the schedule applicable to goods of American origin. This increase, it may be observed, is practically prohibitive.

These conditions are necessarily discouraging to our exports, and it is not astonishing that during the past three years there has been a steady decline in the volume of imports to this country from the United States, the figures being:

1902.....	\$82,
1901.....	88,
1900.....	98,

During the same years the exports to the United States from France were as follows:*

1902.....	\$48,817,042
1901.....	48,839,617
1900.....	49,254,372

These are French statistical returns and it may be remarked that the figures are lower than they should be, as French authorities frequently credit to other countries merchandise intended for the United States and merely transshipped at London, Antwerp, Genoa, etc.

The total value of merchandise exported from France to the United States does not include the many millions of dollars' worth of articles purchased by American tourists annually, a trade that is counted upon by French manufacturers and which has acquired enormous proportions within the last four or five years. The figures for this business appear in no statistical form, for obvious reasons.

A lower rate of duty than that paid upon American goods is paid by imports from the following countries: Germany, Austria-Hungary, Bulgaria, Belgium, Cyprus, Denmark, Spain, Italy, Great Britain, Montenegro, Holland, Roumania, Russia, Servia, Switzerland, Turkey, Sweden, Norway, Greece, Bolivia, Colombia, Japan, Mexico, Persia, Argentina, Dominican Republic, Asiatic Turkey, Uruguay, Canary Islands, Egypt, Morocco, Tripoli, Russia in Asia, Haiti, and, with the exception of a few items, Canada.

As matters stand it is surprising that we have done so well; but I am persuaded that, notwithstanding the adverse conditions, we shall do much better, particularly when it comes to be understood that the French colonies present an inviting field for American exporters, and where in many instances they find more favorable conditions than obtain in continental France. The general character of American exports to France is such as to arouse no particular hostility. Taken generally, they consist of American food products, of raw materials of which this Republic is in serious need, and of agricultural implements and machinery, the importation of which is rapidly strengthening the resources of this country.

ROBERT P. SKINNER, *Consul*.

MARSEILLES, FRANCE, *September 10, 1903.*

*Our imports from and exports to France during the fiscal years (the French returns are for calendar years) ended June 30, 1900, 1901, and 1902, are given as follows in the official returns of the Bureau of Statistics, Department of Commerce and Labor:

Year.	Imports from France.	Exports to France.
1900	\$73,012,085	\$83,335,097
1901	75,458,739	78,714,927
1902	82,880,036	71,512,984

EXTRACTION OF BITUMEN FROM ROCKS IN FRANCE.

(From United States Vice-Consul-General Morgan, Marseilles, France.)

In reply to Department's instruction of July 22, 1903, inclosing a request from a correspondent in Owego, N. Y., for information respecting the use of certain machinery for the extraction of bitumen from rocks at Forcalquier, France, with the aid of sulphate of carbon, I have to report my inability to discover an instance where such means are employed for the purpose indicated. The director of the bitumen mines at St. Martin-les-Eaux, the only concern I can find engaged in this work in the neighborhood of Forcalquier, Basses-Alpes, has no knowledge either of the machine in question or of the sulphate-of-carbon process. The Société Marseillaise du Sulfure de Carbone, Marseilles (G. Deiss, director), which produces large quantities of the chemical in question, is also ignorant of its use in France for the mining of bitumen, while admitting the possibility of its application could a practical method of doing so be found.

From inquiries among the large bitumen-mining concerns of this country I learn that the results which have attended experiments with sulphate of carbon in the past have not warranted its general use. The ever-present danger of explosion with this chemical and the great difficulty of preventing loss by escape through the many tubes and small taps of the machinery have hitherto been found insurmountable obstacles to the adoption of this solvent. None of the mining firms who have written me have any knowledge of the use in this country of the machine referred to by the Owego correspondent, and I am therefore led to conclude that its use has been discontinued since the date of the work in which the apparatus is described.

I am endeavoring to secure data as to the means employed for extracting bitumen from calcareous rocks, and will transmit such details as I may be able to gather at the earliest possible moment.

VICTOR H. MORGAN,
Vice-Consul-General.

MARSEILLES, FRANCE, *August 27, 1903.*

DISCOVERY OF TIN IN THE TRANSVAAL.

The British South African Export Gazette of September 4, 1903, states that much interest has been excited in Johannesburg during the past few weeks on account of the recent discovery of tin in the Transvaal. It is thought by experts that the colony will prove as rich in tin and copper as in gold. The tin-bearing property is situated on the eastern border of the Transvaal, on the edge of the high South African plateau. It is stated that the underlying formation of the whole district is granitic. In places overlying this granite formation are the uplifted remnants of different schistose rocks. Tin-bearing veins are found at the contact of these schists with the granite. Three lodes have been discovered. A sample taken from one of them yielded 3.5 per cent of white metal, indicating a value of \$22.50 per ton. The tin oxide yielded 67 per cent of tin. The Transvaal government's railway department is surveying the property with a view to connecting it with a railway under the general railway-extension scheme of the Transvaal administration. The mineral would thus be within easy reach of Delagoa Bay, whence it could be shipped to England at a nominal cost. The shares of £25 (\$122) each changed hands during the first week in September at £60 (\$292). The great merit of the present find is that the mines will be worked very cheaply, as the mineral is likely to be near the surface.

EFFECT OF MOTOR-CAR TRAFFIC ON DRY ROADS.

(From United States Consul Halstead, Birmingham, England.)

In the editorial chat of the Car Magazine, of which Hon. John Scot Montague, M. P., is the editor, it is stated that the county surveyor of Surrey has discovered a curious effect that motor-car traffic has on roads in dry weather. "The large rubber tires," the surveyor says, "separate the small metal from the large and extract it, so that it is a common occurrence after a dry day to find long lengths of road, where the surface had been perfect in the morning, covered with a fine, sharp grit, which had been sucked up during the day by india-rubber tires." The chairman of the same council says that heavy motors going at a rapid rate tear gravel roads all to pieces, and is in favor of making experiments with a view to discovering a better wearing surface. "It is obvious," is the writer's comment, "that as motor traffic increases the

demand will arise for a smoother surface, and before long, with prosperity of the country in their charge, those responsible for the maintenance of the roads will have to consider the problem seriously. What was sufficient for country vehicles twenty years ago is entirely unsuited to the changed conditions of to-day. The car-road committee, aided by several eminent county surveyors, will be seriously tackling this problem in a month or two, and I hope their deliberations will bear fruit in proposals which will have effect on this nuisance in the future." The surveyor also states "traction engines can haul heavy materials more cheaply than horses can; but that in winter they do very considerable damage to flint roads." He is of the opinion that unless railway rates were lowered the use of traction engines and lorries will increase.

MARSHAL HALSTEAD, *Consul-General*
BIRMINGHAM, ENGLAND, *September 16, 1903.*

ATMOSPHERIC NITROGEN FOR FERTILIZING PURPOSES.

(From United States Consul-General Mason, Berlin, Germany.)

The gradual but ultimately inevitable exhaustion of the potassium nitrate deposits of South America lends a growing interest to methods which have been devised for obtaining a supply of nitrogen for fertilizing purposes from the inexhaustible storehouse of the atmosphere. That this can be done as a scientific process has long been known. The first method was by passing a current of air over red-hot copper, whereby the oxygen combined with the metal to form copper oxide, leaving the nitrogen free. At first the nitrogen thus reduced was fixed by combination with calcium carbide to form calcium cyanide of lime (Kalkstickstoff) or calcium cyanamide, a combination of carbon and nitrogen, which had all the essential properties of a nitrate fertilizer. But as the use of calcium carbide rendered the product unduly expensive, a method was sought which would employ a substitute for that material, and this was found by Dr. Frankenstein, who brought the nitrogen into combination with a mixture of powdered charcoal and lime in an electric furnace. The product of this combination is a black substance containing, besides the lime and carbon, 10 to 15 per cent of nitrogen, in perfect condition for use as a fertilizer. From the experiments thus far made with this new artificial nitrate—which is known in commerce as calcium cyanamide—it appears that its nitrogen acts upon plants quite as effectively as that contained in a proportionate quantity of nitrate.

potassium or sodium nitrate (Chile saltpeter). The scientific problem of obtaining nitrogen for fertilizing purposes from the atmosphere would seem therefore to be satisfactorily solved. Whether it can be done on a very large scale and at a cost which will make it economically available for general agricultural purposes remains to be demonstrated by practical experience.

FRANK H. MASON,

BERLIN, GERMANY, *October 21, 1903.*

Consul-General.

SCIENTIFIC INVENTIONS AND DISCOVERIES.

(From United States Consul-General Hughes, Coburg, Germany.)

Antifrost solution.—As an excellent remedy against the freezing of shop windows, the Pharmaceutische Zeitung recommends the application of a mixture consisting of 55 grams of glycerin dissolved in 1 liter of 62 per cent alcohol, containing, to improve the odor, some oil of amber. As soon as the mixture clarifies, it is rubbed over the inner surface of the glass. This treatment, it is claimed, not only prevents the formation of frost, but also stops sweating.

Heat-proof putty.—Mixing a handful of burnt lime with 120 grams of linseed oil, boiling down to the usual consistency of putty, and allowing the plastic mass to spread out in a thin layer to dry in a place where it is not reached by the sun's rays, yields eventually a very hard putty. When required for use it is made plastic by holding over the funnel of a lamp; on cooling it regains its previous hardness.

Disinfecting apparatus.—A new apparatus, of French origin, is based upon the evaporation of formic aldehyde. The solution of formic aldehyde is boiled in a vessel heated by spirit or other lamp, the escaping vapors being led through a tube made flexible, so that it can be passed through the keyhole of the door of the room to be disinfected. A gauge shows the level of the liquid, and scales are provided to show the amount of liquid to be evaporated to disinfect the room properly.

Improved wort-clarifying apparatus.—A Belgian process and apparatus for clarifying wort allows finely ground malt to be used in brewing. The apparatus consists of a number of separate filtering units, each made up of two plates of perforated sheet metal, in which is placed a cloth tube, the lower end of which protrudes below the plates. Along the lower edge of the tube are two wooden strips, which can be moved by mechanical means toward each other, so as to make a bag for filtering, and can be moved apart to allow of the discharge of the malt dregs, which are mashed until completely exhausted. The wort is made to enter the filters through nozzles.

An alcohol substitute.—Alcohol, suitable as a substitute for ordinary alcohol, is obtainable, according to a German inventor, from fæces by submitting the fæces to dry distillation, absorbing the gases produced in water, and distilling the mixture thus obtained. The residues from this last distillation may be used as the medium for absorbing the gases.

Mending india-rubber articles.—For mending rubber shoes, balloons, hose, tires, etc., the Deutsche Chemische Wochenschrift recommends the following: Articles are first freed of adhering foreign particles and thoroughly dried. Varnish, as, for instance, on rubber shoes, is removed by means of emery paper or a file, and the surface thus treated is well rubbed over with benzine. The edges of a hole are then painted over with a solution of Para caoutchouc in benzine, a fitting strip of natural rubber being laid over it and a solution consisting of 4 parts of benzine, 3 of carbon sulphide, and 1 part of sulphur chloride is applied to the edges by means of some cotton wool tied to a wooden holder, this solution serving to vulcanize and to increase the resistance of the rubber. The joined parts have, of course, to be well pressed together.

New tannic acid.—An Austrian invention has for its object the preparation of tanning extracts at about 28° to 30° Bé from the waste liquors resulting in the manufacture of sulphite pulp. An important feature is the treatment of the liquor in such a manner as to avoid a dark coloration of the extract. After a determination of the percentage of free and combined sulphurous and acetic acid in the raw liquor, a quantity of zinc dust sufficient to convert all sulphurous acid into hyposulphurous acid is added and the liquor is agitated. A strong acid, such as sulphuric, phosphoric, or oxalic acid, is gradually added, and the liquid, if necessary, cooled to prevent a rise of temperature above 30° C. A sulphate, phosphate, oxalate, or other soluble salt may be used for precipitating the tannin in solution, and the precipitate is removed by filter presses and the extract evaporated down.

Preservative composition.—A new German composition, or paint, for protecting stone, wood, cement, etc., from the effects of damp or other deleterious influences consists of quicklime, chalk, mineral colors, turpentine, boiled oil, galipot, rosin, and benzine. The lime, colors, and turpentine are first mixed and then made into a paste with the boiled oil. The paste is finely ground and mixed with the rosins previously dissolved in the benzine.

New anæsthetic.—Hungarian dentists and chemists claim to have discovered a valuable local anæsthetic, an alkaloid, “nervocidin,” the hydrochloride of which is stated to have properties similar to cocaine, but to produce a much more lasting anæsthesia. The

is obtained from an Indian plant, "gasu basu," the properties of the leaves of which were first discovered by Dalma, who successfully employed them in painful pulpitis with such good results that he reported that the drug might displace arsenic for dental purposes. B. von Fenyvessy has investigated the properties of the alkaloidal hydrochloride, as prepared by Dalma, which is a yellow, amorphous, hygroscopic powder, readily soluble in water. It produces marked anæsthesia of the cornea in a 0.1 or 0.2 per cent solution, which is very persistent, and a 0.1 per cent solution brushed on the mucous membrane of the cheek also gives marked anæsthesia. Stronger solutions, exceeding 0.5 per cent, produce irritation of the cornea, and a 2 per cent solution causes ulcerative keratitis in dogs and rabbits, which lasts ten days, during which period the anæsthesia also lasts. It does not appear to produce anæsthesia by subcutaneous injection. Its general effect is that of a paralyzing poison. Although its anæsthetic effect is much more prolonged than that of cocaine, the length of time necessary before this effect supervenes, the irritation caused by the drug, and the toxic symptoms it produces do not point to the probability of its being of general service, except perhaps in dental practice.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *September 21, 1903.*

Consul-General.

THE HYGIENIC CONGRESS ON MALARIA AND TUBERCULOSIS.

(From United States Consul-General Guenther, Frankfort, Germany.)

Of the resolutions of the International Congress for Hygiene, those referring to the prevention of malaria and tuberculosis are especially important.

On motion of Mr. Patrick Munson, an English physiologist, the following resolution was passed:

In recognition of the practical importance of the "mosquito-malaria theory" the congress shall bring pressure upon all governments in malaria districts for the purpose of, first, causing an examination of civil and military officers as to a practical knowledge of this theory before employing them in such localities; second, of compelling the educational establishments in such districts to add instruction concerning the malaria theory and its practical applications; third, to consider officers who know nothing of this theory or who systematically deny its practical application as unfit for service in malaria districts.

The first and second section of the congress jointly passed the following resolution:

Human tuberculosis is entirely untransferable from one person to another. At the present state of our knowledge it is still necessary to recommend hygienic measures to prevent the transfer of animal tuberculosis to human beings.

The last sentence apparently means that the theory of Prof. Koch concerning the difference between tuberculosis in cattle and men is not yet considered as conclusive by the majority of experts.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *September 17, 1903.* *Consul-General*

DISCOVERY OF COAL IN HONDURAS.

(From United States Consul Moe, Tegucigalpa, Honduras.)

A discovery of a large coal bed has been made in the mountain of the Department of Yoro, in Honduras. The prospective field has been named "El Porvenir." Expert examination and analysis of several samples of the coal taken from or near the surface establish the claim that it cokes with excellent result. All the samples were taken from the outcroppings of the vein, where the surface water has been running over the bed during a great many years; consequently the presence of decomposed matter materially lessens the value of the results of the various tests. But coal taken at a depth of 2 feet or more exhibited much better qualities, being hard and lustrous. It is therefore believed that at a depth of from 100 feet the deposits should be found to possess all the requisites of first-class coal. The foot wall is said to be formed of silicate of alumina and magnesia, a formation, it is said, frequently encountered beneath coal beds.

The results of the examination seem to warrant the opening of these mines. As there are no other coal fields of value in this part of the continent, the exploitation of this property should carry it profitable returns, as well as inaugurating a new industry in a region now but sparsely populated. The projected railways, and such as are now in operation both in this and adjoining republics, will receive direct impetus through the opening of these coal fields. Coal is at present brought from the United States.

The section in which the coal field is located is remote from roads or other means of transportation, and the profitable opening of mines would require the building of railroads to get the product to markets; but present and prospective demands will justify the necessary expenditure if development of the field gives assurance of an adequate supply of coal of good quality.

ALFRED K. MOE, *Consul*
TEGUCIGALPA, HONDURAS, *September 23, 1903.*

NEW FLOORING MATERIAL.

(From United States Consul Morgan, Lucerne, Switzerland.)

Architect Siegwart, of Lucerne, has patented a new system of a concrete flooring, consisting of hollow tubes of mortar and iron. It is fireproof, and will, I believe, be of considerable interest to builders in the United States.

It is claimed that this system is an improvement on the inventions of Monnier, Hennebique, Koener, and others. It consists in manufacturing, in a factory, the mortar into hollow beams for forming a floor or roof ready for delivery to the builder—one which can be laid together on the supporting walls without planking. By this means one floor after another can be laid in a very short time, and the floor so laid can be used to work upon at once without scaffolding.

This appears to me a great advantage compared with the usual devices of stone, plaster, etc., which are dependent largely upon temperature and weather, and in all cases must be left for some days to dry before they can be walked upon.

One advantage claimed for the Siegwart system is that no workmen are required other than the ordinary laborers. Another fact which should be considered is that armored beams which are made in the building can only be depended upon for uniformity when the mortar is mixed in exactly the same proportions and when it is not influenced by shocks, frost, or rain during the time of setting. When this work is done in the factory it is far easier to secure uniformity and protect the beams against weather conditions.

The beams manufactured at Lucerne have a uniform breadth of 25 centimeters (9.84 inches) and are manufactured in five sizes, viz, 9, 12, 15, 18, and 21 centimeters (3.5, 4.7, 5.9, 7.08, and 8.36 inches) high, according to the length of span and load. The size of the iron rods in the beams is between 5 and 10 millimeters (1.96 and 3.9 inches), and generally six such rods are used in each beam. Two of these rods are laid parallel with the under border of the beam, and the other four are bent upward into the form of a knot at the ends in order to strengthen their holding power. The proportion of cement with coarse sand is 1 to 4. Though the beams are made hollow, they have the same supporting power as though they were solid, with a great reduction of weight. This is an important factor where freight charges are to be considered. The beams, being hollow, offer also more favorable conditions for heating. The sides are ridged, so that the cement for joining them together can enter into

the vacant spaces and thus form a solid mass. The laying together of the beams is done exactly as with wooden beams.

The beams are supplied in different lengths. In Lucerne they are made up to 5.5 meters (18 feet) long; in Italy and Germany, up to 6.5 meters (21.3 feet) long; and in Russia, up to 7.5 meters (24.6 feet) long. They can be used, in addition to floors, for terraces, roofs, staircase supports, and for walls where there is a side pressure, as, for instance, in coal bunkers, warehouses, etc. It has been

FIG. 1. IRON MOLDS AND CUTTING MACHINE.

demonstrated that with a load from four to five times as great as the normal the beams have only bent to the extent of 1 or 2 millimeters (0.0394 and 0.0788 inch).

The chief advantages claimed for these beams are: Great supporting power and security from fire; they come dry and hard from the factory and can, therefore, be used at once as floors for working on; greater facility and speed in building is secured by their use; freedom from excess of heat and cold by reason of their being hollow; thickness of completed floors is reduced by their use; the beams can be used as a heating floor by sending warm air through them.

The manufacture of the beams as practiced in the Siegwart Beam Factory in Lucerne, Switzerland, and in other European countries

is very simple. They are manufactured in layers of 2.5 meters (8 feet) breadth and not singly. The hollow spaces are formed by means of iron molds, around which the cement is laid and the iron rods placed in position, as will be seen by the accompanying cut (fig. 1). These iron molds are constructed so that they can be reduced in size by the turning of a screw and withdrawn when the cement has become hard. The beams are cut, before the cement has set, by means of a patent cutting machine, which is shown in the accompanying photograph and which can be placed in any position.

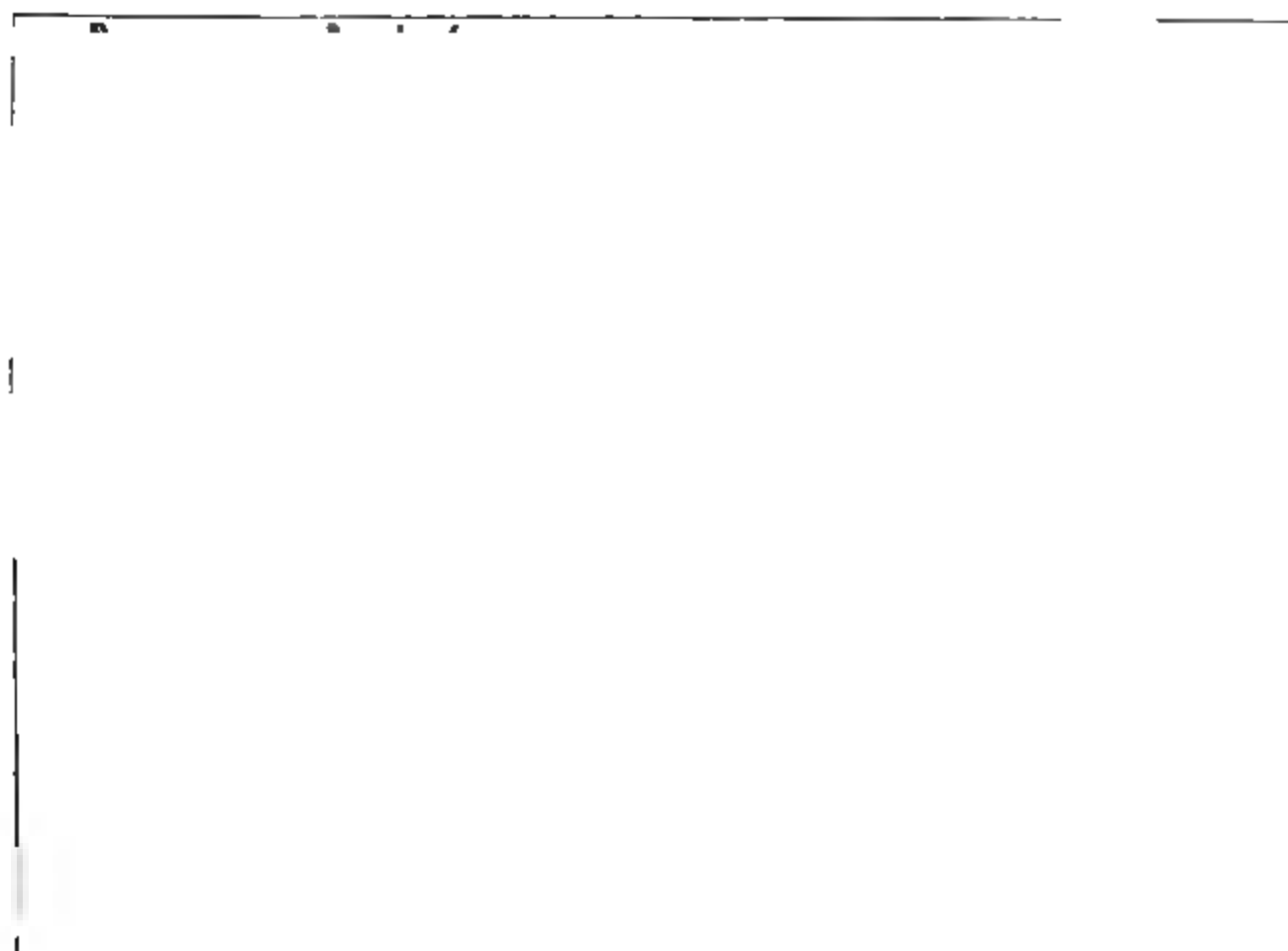


FIG. 2.—BUILDING IN COURSE OF CONSTRUCTION, SHOWING SIEGWART BEAMS.

Six to eight hours after laying the beams the iron molds can be withdrawn, but they are generally left to harden for four to six days before they are separated. After two to three weeks they are ready for delivery.

There are already a large number of buildings, both public and private, in Switzerland in which the Siegwart beams have been employed, and in all the buildings now in course of construction in Lucerne they are being used.

At present there are three factories in Germany, three in Russia, and one in Italy occupied in manufacturing beams under the Siegwart patent.

A photograph showing the flooring with the Siegwart beams in a building in the course of construction (fig. 2) and one showing the beams ready for shipment (fig. 3) are inclosed herewith.

HENRY H. MORGAN, *Consul.*

LUCERNE, SWITZERLAND, *September 22, 1903.*

FIG. 3. -SIEGWART BEAMS READY FOR SHIPMENT.

ELECTRICAL POWER IN FRANCE.

(From United States Consul Covert, Lyons, France)

WATER VS. STEAM POWER.

The leading manufacturers of France are talking a great deal about "la houille blanche," which translated literally means "white coal," the name applied by the French to water power. A monthly periodical called *La Houille Blanche*, devoted solely to the discussion of the subject, has as its motto the following: "Black coal has made modern industry; white coal will transform it." The *Economiste Français*, in a recent article, says that "a country like France, very poor in coal but very rich in waterfalls, may make everything

by introducing a general use of all this power, in which our advantages are only surpassed by Switzerland and the United States." Last year a congress was held in the Alps to consider the power that might be utilized in those mountains which, up to the present time, have served only for the enjoyment of tourists attracted thereto by the wild and romantic forms of nature. The report of this congress was recently printed in two large volumes. The congress showed the existence of 48,860 waterfalls in the Alps, 46,000 of which are in use and represent 489,000 horsepower. The reports note the horsepower as follows in the Departments given:

	Horsepower.
Isère.....	37, 000
Savoie.....	31, 000
Lower Pyrénées.....	17, 000
Vosges	13, 000
Doubs.....	11, 000
Total.....	109, 000

All of this applies to unnavigable streams. In the navigable rivers the volume of utilizable water is much less and the horsepower is fixed at 86,000. In 1901 it was estimated that 48,000 establishments in France were provided with hydraulic power, utilizing 575,000 horsepower. At the same time it was estimated that in all France the steam power in use aggregated 6,780,000 horsepower. In the Alps, where the congress was held in 1902, according to the calculations of Mr. Rene Tavernier, of Lyons, the mountainous region between the sea, the Rhône, and the frontier of Italy can furnish not less than 3,000,000 horsepower, and 5,000,000 during eight or nine months of the year. This is an immense reserve force which has already been partially drawn upon since 1900. The unnavigable water courses of the four Departments of the Isère, Savoie, Haute-Savoie, and Doubs furnished nearly 100,000 horsepower. The navigable water ways in the single Department of the Rhône afford 5,000 horsepower.

The hydraulic force in the Alps has been employed in the production of electricity that is extensively utilized in chemical and metallurgical industries. According to a report of the chamber of commerce of this city (Lyons) for 1901, 85,000 horsepower is employed as follows:

	Horsepower.
Aluminum works.....	18, 000
Chlorate of potassium.....	15, 000
Carbure of calcium.....	20, 000
Metallurgical products.....	22, 000
Soda and chloride.....	10, 000
Total.....	85, 000

ELECTRICAL WORKS.

The electrical works in and around Lyons, furnishing power at a distance, possess 23,000 horsepower. Power is furnished to flour mills, to chemical works, and to hundreds of weavers, where a whole family live, from generation to generation, in two rooms which are encumbered by three or four looms. At one time there was a superabundance of mills producing carbure of calcium, capable of an output of 50,000 tons annually, while the consumption was only about 12,000 tons. As production was far in excess of consumption many of the electrical works in the carbure of calcium business went into other lines, such as supplying power to mills at a distance, to mines, and manufacturing dyestuffs. One is now producing from an electric furnace steel which is said to compete for making tools with the best steel of France or England.

Electricity is utilized in almost every branch of industry in and around Lyons. In April, 1903, the Lyonnese Power Company of Rhône furnished 12,003 horsepower to 2,010 subscribers in the city of Lyons. This power is used by bakers, pork butchers, bookbinders, locksmiths, shoemakers, washerwomen, jewelers, toy makers, and in all the branches of work in silk, velvet, tulle, and lace.

ELECTRICITY FOR HOUSE INDUSTRIES.

France is a country where a large aggregate industry is carried on by individuals in their families, and an effort is being made to furnish these classes with electrical power in their households. It is backed by heavy property owners who feared that the application of steam or electricity in large factories would deprive them of tenants, and they have leased electrical appliances to their tenants, to be paid for by easy installments. In Lyons one of the most populous quarters of the city would be entirely deserted if the weavers could not enjoy the advantages of electrical power in their competition with steam-impelled machinery. In the Department of the Puy-de-Dôme, around the city of Thiers, in the neighborhood of a small stream—the Dore—hundreds of families have small outfits of machinery, with which they make knives. Upon the first proposition to erect a large factory to replace these little family establishments some enterprising men in the neighborhood, moved by philanthropy and the desire to prevent the industry from moving to other quarters, set to work to secure electrical power for the community, and now their machinery is run by electricity brought from a distance of from 50 to 75 kilometers (31 to 46 miles).

The manufacture of silks and velvets by steam-propelled machinery in France has driven the hand loom out of thousands of households in this city, notwithstanding the struggle to introduce

electrical power into family service. The looms have been transferred to the country into farmhouses, where they can be utilized in the winter and in weather unseasonable for out-of-door work. In farmhouses for a distance of 100 miles around Lyons men, women, and children put in their odd hours at work on a loom, generally manufacturing cheap mousselines and the finest of silk velvets. It is proposed to connect many of these isolated looms with a current of electricity, thus introducing power, light, and heat into the poorest households of the country.

One of the steam roads of this district began running by electricity the first week of this month. The power is derived from a waterfall known as "Le Torrent du Drac," in the Alps, over an air trolley. The "houille blanche" locomotive weighs 50 tons, is 12.50 meters (about 37 feet 8 inches) long, and is of 50 horsepower. It will draw a train of 110 tons up an ascent of 0.0275 per meter (39.37 inches). Its brakes will permit it to haul, in a descent, a train of 300 tons. The success of this "white-coal locomotive" has thus far been so signal that it is believed many trains on the great railroads of France will soon be operated by electricity.

DYNAMOS IN USE.

The far greater number of the dynamos used in France are made at the Westinghouse and Thompson-Houston works in Havre and Paris. Next to this country, the supply comes from Switzerland, whose dynamos are well liked here. Men in electrical enterprises in this country say that the great obstacle to receiving their machinery from the United States is the high freight rates and the customs duty at French ports.

J. C. COVERT, *Consul*.

LYONS, FRANCE, *September 23, 1903.*

NEW INVENTIONS AND PROCESSES.

(From United States Consul-General Hughes, Coburg, Germany.)

NEW ELECTRIC AND GAS BURNERS.

Two sets of cotton, ramie, or silk threads are used in the manufacture of a new German metallic skeletonized earthy incandescent structure for electric lamps and gas or vapor burners. One set is impregnated with a solution of nitrates of refractory oxides, while the other set is treated with such salts of the platinum group as are capable of leaving behind a body of homogeneous metal when exposed to a moderate heat; such for instance, as the compounds formed by the metals or their halogens with aliphatic sulphur

derivatives, particularly the nitrates of the sulphine salts. The impregnated threads are well dried, and compound threads are formed in which threads of the first kind are coiled round so as to cover threads of the second kind. These are then formed into the required shape and exposed to a calcining heat to burn the fiber, to reduce the platinum salts to the metallic state, and to convert the earthy salts into oxides. The structure obtained is finally treated with a solvent for removing the oxide crust.

FERRO-CONCRETE PILES.

Ferro-concrete piles have just been used in the construction of the new law courts at Berlin-Wedding. They have been largely employed in getting in the foundations, which are placed in poor and treacherous ground, with a very unstable coefficient of resistance. After many trials, it was determined to adopt piles of triangular section, with the corner cut off. They are composed of clean, hard, river ballast and Portland cement of the best quality, in the proportion of one part of the latter to three of the former. Their length varies from 17 to 26 feet. The armature consists of three iron rods tied together at regular vertical distances by eye rods, spaced every 10 inches, having a diameter of a quarter of an inch, and set into the concrete, with a blunt point at their lower end.

According to the *Centralblatt der Bauverwaltung*, the concrete, slightly wet, is carefully prepared in a pug mill and deposited in vertical wooden molds in layers 8 inches in thickness, subsequently reduced by pressure to about half that size. Before fixing the tie-rods and adding fresh doses of béton, the surface of each preceding layer is roughened, so as to insure a thorough mixture and incorporation of the whole mass. Thus manufactured, the pile is left for a period varying from twelve to twenty-four hours. During the next seven or eight days it is watered constantly and abundantly. It is then taken out of the mold and again watered for the next eight or ten days and becomes sufficiently hardened and consolidated to be safely transported to the site of the works. The piles are allowed to remain in this condition for about a month, when they are fit to be driven, which operation is effected by means of a steam pile driver, with a ram weighing 2.5 tons. To prevent the heads being damaged by the fall, which is 5 feet 6 inches, they are protected by a buffer, built up of sheets of lead, plates of iron, and timber packing, all held together by an iron ring. Special arrangements are made for guiding the piles in their descent.

ARTIFICIAL-SILK MANUFACTURE IN GERMANY.

A plant erected near Sydowsaue, Germany, is at present turning out 50 pounds of skein silk a day, which product can be increased

in quantity to 2,000 pounds. The silk is soft in texture and creamy in color. Each thread is made up of eighteen single strands; a single strand is hardly perceptible to the naked eye. In strength, it is but one-third that of the real silk. When woven into pieces, the new substitute is said to have the appearance of real silk. How this new article will compare with the genuine, in the matter of wear and price, it is impossible at present to state. The manufacturing process is likewise undiscoverable. It is asserted, however, that the pulp undergoes a chemical process and is pressed through very fine tubes, by hydraulic pressure, forming the single strands which go to make up the thread.

NEW JACQUARD CARD PUNCHING MACHINE.

A Jacquard card punching machine, effecting the pointing of the most delicate details with absolute mathematical precision without possible error in the punching and producing patterns which are immediately available for use with Jacquard embroidery machines, has been designed by two Polish engineers. The machine is composed of two essential parts—(1) the apparatus for reading in or pointing by means of which the operator follows the contour of the design for reproduction to determine the position of the holes in the card or pattern; (2) the punching apparatus which registers step by step upon a band or paper, punched according to any particular combination, the actual value of the intervals, according to vertical and horizontal displacements of the table, carrying the sketch or pattern in the reading-in apparatus.

NEW MORDANTING PROCESS.

It is well known that the ordinary method of mordanting wool with a bichromate and a reducing agent always makes the fiber more or less tender, and Amend proposed to substitute the use of a solution of chromic acid containing 1 to 2 per cent of the weight of the wool, at a temperature not exceeding 65° C., and to treat it afterwards with a solution of sodium bisulphite. According to a recent French patent, better results are obtained with neutral or slightly basic chromium sulphocyanide. This salt, if neutral or only very slightly basic, will mordant wool at 65° C. The double sulphocyanide of chromium and ammonium, got by dissolving chromic oxide in ammonium sulphocyanide, can also be used. Nevertheless, in order to precipitate chromium chromate on the fiber, it is advisable to have a soluble chromate and a nitrite present, as well as a soluble copper salt and a free acid. One example of the process is as follows: Make the bath with 2 to 3 per cent of ammonio-chromium sulphocyanide, one-half of 1 per cent sodium bichromate, one-third

of 1 per cent sodium nitrite, one-third of 1 per cent sulphate of copper, and 1.5 per cent sulphuric acid—percentages based on the weight of the wool. Enter cold and slowly heat to about 60° to 65° C. Then work for half an hour, lift and rinse. The bath does not exhaust and can be reenforced and used again.

NEW TOWAGE SYSTEM FOR CANALS.

The canal towage system now in general use—running an automotor on the path along the canal—requires a very good path and is expensive in the cost of road construction and upkeep, besides there are unavoidable vibrations of the engine. With two rails the roadbed construction is less expensive, but the adhesion is not sufficient for dragging heavy boats, except with very heavy engines. Still greater economy in roadbed construction is effected if a single rail be used, but there still remains the adhesion difficulty. An idea of Fabre, described in one of the May numbers of the *Zeitschrift für Elektrotechnik*, seems to overcome the difficulty by employing two-axle pairs, inclined against one another, instead of the usual two-wheel axles, each with two vertical axles. A wheel is mounted on each axle, and each pair of two wheels grips the single rail. The engine is supported by one broad, lateral wheel, which runs on the road, the object aimed at being to increase the adhesion and stability of the engine. Comparing the cost of this system with that of three other designs which competed for the Teltow Canal, and, assuming 12 pfennigs (3 cents) per kilowatt hour as the cost of working, the capital expenditure is 2,500,000 marks (\$595,000) for the Siemens & Halske system, 2,597,000 marks (\$618,086) for the Rudolf system, and 1,007,980 marks (\$239,900) for the Ganz system. The cost of working per ton kilometer is 1.07 pfennigs (one-fourth of 1 cent) for the Siemens & Halske, 0.667 pfennig (one-sixth of 1 cent) for the Feldmann & Zehme, 0.61 pfennig (one-ninth of 1 cent) for the Rudolf, and 0.413 pfennig (one-tenth of 1 cent) for the Ganz system.

STEEL VS. IRON PIPES.

The frequent cases of land subsidence, especially pronounced during heavy rains, and more or less experienced where extensive coal mining has been carried out, has once more brought to the front the great advantage of steel over iron pipes. The latter have long been universally used, largely because of their cheapness and of the simplicity with which water tightness and gas tightness has been insured. Experience has shown that leakages, if not also breakages, may result from the settlement of the surrounding earth, hence the adoption of steel pipes has become a matter almost of expediency rather than of choice, notably in the case of the producer-gas-distribution scheme throughout the honeycombed district of

South Staffordshire in England. The most important first application, however, was in connection with the line of piping for Coolgardie Water Supply in Scotland, which extended for 300 miles inland. In that case one of the considerations was the lighter weight and facility of transport provided by the steel pipes as compared with the thick cast-iron conduits. The experience gained has been all in favor of an extension of the system of steel piping, but the producing capabilities of the country have scarcely been adequate. The only technical difficulty is the forming of the longitudinal joints of the plates forming the pipe and the design of a suitable coupling connection. But the problem has been solved in connection with the Coolgardie scheme and the South Staffordshire gas supply, and it is interesting to note that a large Glasgow concern intends to manufacture pipes up to 48 inches in diameter.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *September 14, 1903.*

Consul-General.

NEW SOLDERING IRON.

(From United States Consul Monaghan, Chemnitz, Germany.)

An extremely practical gas soldering iron was recently placed upon the Berlin market. As is apparent from the illustration, the copper bit is movable and can be placed at any desired angle. By

virtue of this construction the iron is of great convenience in soldering metallic edges so located as to be difficult of access. The heat generated by the gas flame (Bunsen burner) is utilized to its fullest extent in that the hollow part (A) prevents rapid radiation and concentrates the heat upon the copper bit (B). This system of heating develops a sufficiently high temperature to permit of the employment of a comparatively small piece of copper in the bit and also economizes in the amount of gas consumed. It is reported that a soldering iron of this kind which does the work of an ordinary soldering iron possessing a copper bit weighing 800 grams consumes but 102 liters of gas per hour, which, according to the prevailing price of gas in Berlin, represents a cost of from 3 to 5 cents per ten hours. The size of the flame can be regulated

at will and the apparatus attached to any gas jet by means of a hose and operated without the employment of a bellows. The short length and comparatively light weight of the iron makes it a most convenient and handy tool to manipulate.

J. F. MONAGHAN, *Consul*.

CHEMNITZ, GERMANY, *September 30, 1903.*

NEW INDUSTRIES IN GREECE.

(*From United States Consul McGinley, Athens, Greece.*)

Marble.—Quarries of beautifully colored marble have been opened on the islet of Dokos, near the island of Hydra, Greece. It is claimed for this marble that it bears a very high finish, and when polished shows bright colors and a luster surpassing all other colored marbles of Greece. G. P. Vadoros, near Pallis & Cotzias, Hermes street, Athens, has charge of the quarries, and will furnish samples and information to those interested.

Brush factory.—A steam-power brush factory has been started in Piræus by A. & G. Symigdala. It is the only one in Greece or in the Levant and manufactures brushes of every size and description.

Cement flagstones.—A factory for the manufacture of white and colored cement flagstones, or rough walk tiles, has been set in operation in Athens. S. Stephopoulos, 48 Academy street, Athens, is the manager.

D. E. MCGINLEY, *Consul*.

ATHENS, GREECE, *September 11, 1903.*

STRIKE OF THE LIBERIAN KROO-BOYS.

(*From United States Chargé d'Affaires Spurgeon, Monrovia, Liberia.*)

The Kroo-boys (a tribe of aborigines which inhabit the seacoast of Liberia), as is well known in the shipping world, are the west coast seamen; they are the stevedores and the longshoremen of Africa.

Practically from the time a vessel leaves Las Palmas (Grand Canary) for the west coast, for the round voyage the Krooman does the work of the ship. For his labor he is allowed 1s. (24 cents) a day by the Woermann Line, whose bottoms carry the main portion of Liberian exports. Last January these laborers, or rather that portion of them which reside in Monrovia, demanded 1s. 6d. (30 cents) a day, which the company refused to give; hence the strike. It is as yet practically on, at least in Monrovia. As a strike it is a failure, inasmuch as in the southern part of the coast, even in some ports not ports of entry, Kroo-boys shipped at the old rate. In that

way the ships were enabled to get all the men they needed. Yet one acquainted with African ways will recognize the fact that there may be breakers ahead, for when once in their "palava" all Kroo-boys conclude to hold to their demand the company will probably have to accede. Some time ago the Elder Dempster Steamship Company, to the coast via Liverpool, on its own motion paid 1s. 6d. for the same service.

Within the space of two months three passenger steamers have been wrecked on the Liberian coast, and in each instance, with possibly one exception, these steamers were in nonports of entry, having gone there to get or to land Kroo-boy laborers. Prior to the strike there was no necessity for going to such ports in order to get boys.

The shipping of Liberian aborigines as laborers to the Crown colonies in different parts of Africa has been a question of much concern and misgivings to the Government, and is regarded by many as the source of much of the stagnation in trade and agriculture in Liberia. Fortunately the tenure of the contract by which the Germans held a monopoly in the shipping of laborers from Liberia expired recently and the shipment of Kroo-boys henceforth will be conducted under the direct supervision of the Liberian Government, heavy penalties being attached to any violation of the laws which govern their shipping and their return to the ports at which they were engaged.

JAMES ROBERT SPURGEON,
 MONROVIA, LIBERIA, *August 15, 1903.* *Chargé d'Affaires.*

STRIKE AT CRIMMITSCHAU, SAXONY.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

Crimmitschau has about 35,000 inhabitants, 8,000 of whom, including men and women, are employed as weavers and spinners in the 130 factories of the city. The principal textile fabrics produced are woolen yarns, cassinettes, cassimeres, buckskins, etc., in every variety of color. The chief markets outside of Germany are England, Russia, Italy, Mexico, the Tropics, and oriental countries.

On August 21 a strike began, and about 8,000 employees quit work. The workmen want the workday reduced from eleven hours to ten hours. The employers are resisting this demand by every means in their power. They claim that the rate of wages paid to the Crimmitschau spinners and weavers is higher than the rate paid to any other workmen of the same class in the country, and that they would rather see their factories closed than be placed in a position where they could not compete with their rivals in similar industries.

The manufacturers pay out about \$1,142,400 yearly to the laborers, an annual average for each workman of about \$143.

The textile workers in the neighboring towns have refused to accept work sent to them by the manufacturers of Crimmitschau, and resolutions of sympathy with the workers have been passed and collections taken for their benefit in Dresden, Berlin, and other large cities of Germany.

The strike has now lasted seven weeks, and there are no signs as yet of an understanding being reached. The test of strength is being watched with the keenest interest all over the Empire, for the reason that both sides are putting forth unusual efforts in their determination to win.

ERNEST L. HARRIS,
EIBENSTOCK, GERMANY, *October 6, 1903.* *Commercial Agent*

STRIKES, CONCILIATION, AND ARBITRATION IN FRANCE.

The following article was translated in the Bureau of Statistics, Department of Commerce and Labor, from L'Union des Industries Metallurgiques et Minières of August 11, 1903:

France had 512 strikes, involving 212,704 strikers—162,622 men, 35,326 women, and 14,756 young people—in 1,820 establishments in 1902. They entailed the loss of 4,675,081 days' work, of which 202,604 were suffered by parties who were not strikers. In 1901 there were 523 strikes, causing a loss of 1,826,050 days' work; of these, 138,155 were suffered by nonstrikers. The average loss per striker in 1901 was 15 days; in 1902 the average was 21. The increase was due to the long, far-reaching, general strike of the miners, whose 115,240 strikers lost 3,210,957 days. The other 511 strikes, with 97,644 strikers, caused a loss of 1,261,520 days—an average of 13 per striker. Of the 512 concerns affected by the strikes in 1902, 175 were joint-stock companies and the number of strikers involved was 134,673, or 63 per cent of the total. After the miners, which furnished 15 strikes and 199,009 strikers, come the textile industries with 167 strikes and 34,693 strikers; the chemical industries, with 20 strikes and 18,252 strikers; transportation companies, 38 strikes and 12,195 strikers; metal works, 88 strikes and 9,852 strikers; the building trades, 71 strikes and 5,339 strikers. In 304 out of the 512 strikes the workmen were either entirely or in part members of labor unions. The aid of the labor unions was noted in 184 strikes. Nine labor unions and one combination to assist were organized during the strikes or immediately afterwards. The labor unions have given regular aid to the strikers in 31 strikes. In 224 strikes the help had worked by the hour, day, week, or month—that is, had their pay reckoned by the hour, day, etc.; in 206 they were paid by the piece and in 82 were paid by the hour, day, etc., and by the piece.

NUMBER AND CLASSES OF INDUSTRIES AFFECTED BY STRIKES.

It is interesting to note that the strikes affected all classes of industries—from the mines and forests to those employing the highest kind of skilled labor. There were 5 strikes among agriculturists, foresters, and fishermen; 15 among miners; 3

among quarrymen; 9 among food producers (canned goods); 20 among chemical workers; 14 among the printing trades; 29 among tanners, etc.; 167 among textile workers, spinners, weavers, etc.; 12 among textile finishers; 23 among wood workers; 8 among builders; 13 in metallurgical concerns; 72 among the ordinary metal workers; 3 among the finer metal workers; 18 among stonecutters, polishers, and potters; 63 among constructors; and 38 among transportation people—making a total of 512. Of these, 11.1 per cent were successful, 13.3 per cent were failures, and 75.6 per cent were settled by agreement or arbitration.

CAUSES OF THE STRIKES.

The causes of the strikes were: For increase of wages, 256; on account of reduction in wages, 83; demands for fewer hours of labor, 38; contests relating to wages, manner and time of paying, etc., 36; contests in regard to regulations as to control of labor, 40; to suppress or keep out piecework, 18; contests against rules in the shops, 23; against fines, 15; on account of the discharge or reemployment of certain persons, 42; on account of demands to discharge certain persons, 39; on account of demands to discharge female help, 4; on account of a desire to limit the number of apprentices, 5; on account of sums retained to secure insurance, etc., 6; for miscellaneous causes, 35.

STRIKES IN TEN YEARS.

Taking the average of strikes for ten years, reports show that 22.92 per cent succeeded, 34.39 per cent were compromised, and 42.69 per cent were total failures. The wage question caused, either alone or associated with other questions, 339 strikes in 1902, or 66.2 per cent, with 161,199 strikers, 75.7 per cent of all.

After the question of wages the demands for the discharge or reemployment of persons were the most frequent causes of strikes. Of such there were 81, or 15.82 per cent of the total.

Correctional measures were employed by the Government in 16 strikes, resulting in the punishment of 326 persons by fines or imprisonment; 215 of these occurred during the great mine strike, 29 during a strike at the port of Rochefort, 18 during the marine firemen's strike at Marseilles, and 17 during the textile strike at Vienne.

CONCILIATION AND ARBITRATION IN 1902.

The law of 1902 in re conciliation and arbitration was applied to 107 cases in 1902; in 4 before work was stopped. Thus 20.89 per cent were submitted to compromise and arbitration in 1902, 27.16 per cent in 1901, and an average of 24.06 per cent during the last ten years. The initiative toward arbitration, etc., was taken 60 times by the workmen, 5 times by the employers, and twice by both together. The justices of the peace intervened by virtue of their office in 40 strikes. The efforts at conciliation were rejected in 42 cases—35 by the employers, twice by the workmen, and 5 times by both. After the refusal of all efforts at conciliation 5 contests were decided by a kind of conciliatory action, 2 by direct accord being effected, and 3 by the abandonment of the demands made; 6 other strikes were adjusted directly by conciliation soon after the first step toward actual striking had been taken, and before the opposing party had time to reply to the justice of the peace interfering. The strike was continued in 37 cases after the interference of the justices of the peace. There were 59 other cases for the solution of which committees on conciliation had been formed; of these, 32 were settled directly by the committee.

It was proposed to have recourse to arbitration in 15 cases after failure to effect conciliation. This was accepted 4 times and rejected 11 times—4 times by the employers, 3 times by the working people, and 4 times by both parties. In addition

to the 34 strikes terminated by the committees of conciliation 2 were ended by pacificatory explanations.

To sum up, it seems that 47 differences between the employers and their help may trace their happy settlement directly or indirectly to the law regarding conciliation and arbitration—the law of December 27, 1892—a law formed and passed for the purpose of compelling both parties to be bound by either conciliation or arbitration. Of these 47 cases, 6 were settled in the very beginning, 5 after refusal by the employers to lend their efforts to attempts at conciliation, 32 by the conciliation committees or by arbitration. In the case of 4 disputes submitted to the committees before all went out on strike, peace was established in 2 and a longer strike avoided, and in 2 cases the strike was carried on but failed.

To the results due to the law of conciliation and arbitration should be added the effects produced by the efforts of the prefects or subprefects of districts, who settled 18 strikes, and the mayors of cities, who settled 7. The intervention of unions or professional federations put an end to 16 strikes; private persons, to 3; and in one case both parties went before a certain council and had their difficulties and differences adjusted.

LABOR IN NEW SOUTH WALES.

(From United States Consul Baker, Sydney, New South Wales, Australia.)

All business, or nearly all, in New South Wales is conducted through “trade industrial unions.” Up to March, 1903, 108 unions of employees and 82 unions of employers had been registered in the arbitration court. When a union has been duly registered it becomes amenable to the arbitration laws. The court consists of three members, one of which is a judge of the supreme court. All disputes between employers and employees that can not be adjusted between the parties concerned privately are tried in this court, and its decisions are binding and final. Here wages, hours of labor, and holidays are adjusted. Each union makes its own laws for the government of its members, but on application for registration these laws are submitted to the court, and registration may be refused on the ground of unsatisfactory laws. Once registered, no change can be made except by consent of the court. Each union, as I understand, makes and enforces conditions of membership and has power to reject for lack of qualifications. The length of a day’s work has been fixed generally at eight hours and the minimum wage at 7s. (\$1.70) per day for common laborers, with half-day holidays at expense of employers. If any employer requires more hours or less pay than has been fixed for that particular occupation he is liable to be fined, the arbitration court assessing the fine.

The State is the largest employer of labor, as the railways, tramways, telegraph, and postal facilities are all managed by the government. Besides these, the custom-houses, shipping commission, asylums, prisons, police, State clothing factory, and the savings

banks all give preference to union men, and all private employers are required to employ union men on conditions fixed by order of the court, unless the unions are unable to supply the men.

ORLANDO H. BAKER, *Consul.*

SYDNEY, NEW SOUTH WALES, *August 20, 1903.*

NEW BRAZILIAN RUBBER TAX.

(From United States Consul Kenneday, Para, Brazil.)

I have received a report from United States Consular Agent George E. Pell, at Manaus, transmitting translation of a law recently passed by the legislature of the State of Amazonas, which is herewith inclosed. The new law has created consternation among the rubber buyers throughout the Amazon Valley. Although this new legislation has been in operation for a week, its true effect is not yet felt and may not be for some time, but exporters here are already indulging in gloomy forebodings.

Mr. Joaquim Vianna, a leading and active figure in the Para business world and a man of international experience, who is evidently in sympathy with the scheme, said to me yesterday:

This law was enacted September 9, 1903. The purpose of this act is to establish a duty on rubber of 100 reis (2.5 cents*) and of 80 reis (2 cents) on cauchô, of which the bank will be the receiver. The intention, naturally, is to facilitate commerce, and especially the rubber trade, in the State of Amazonas, by the establishment of a bank which shall be able to advance necessary funds to the aviadores and commerce in general in a place where ready money is very scarce and expensive and business is handicapped accordingly. The words of the law, "With the purpose of promoting the commerce and industry of rubber, concurring for the raise of its price," indicate the intent of the legislators, and there is no doubt that its effect will prove of the greatest benefit to the rubber producers of Amazonas, and I do not believe that it can work harm to others.

On the other hand, Mr. Frank Da Costa, the largest exporter to the United States in Para, with an important branch house at Manaus, says:

This law is sure to work harm to the general rubber trade, but it is yet too soon to say how serious its effect may be. This bank will have 100 reis (2.5 cents) per kilogram advantage over every other buyer in Manaus, and this means practically a corner on the rubber market at that point and an extra annual cost of at least \$400,000, provided the enterprise is well managed. This law is certainly a menace to the whole trade in northern Brazil. However, we can only wait and let matters develop themselves. I have seen other obnoxious and dangerous laws repealed. It may happen again.

K. K. KENNEDAY, *Consul.*

PARA, BRAZIL, *September 18, 1903.*

* Reductions to United States currency throughout this report and inclosures were made in the Bureau of Statistics on the computation of Consular Agent Pell, of Manaus, viz, that the tax of 100 reis per kilogram on 16,000 tons would yield \$400,000.

[Inclosure.]

United States Consular Agent Pell to United States Consul Kennedy.

Inclosed I transmit a full translation, which explains itself. The tax mentioned many believe excessive. The amount of rubber coming into Manaus in a crop year amounts, approximately, to 16,000 tons. A tax of, say, 100 reis (2.5 cents) a kilogram on 16,000 tons is equal to 1,600 contos de reis*—say, £80,000, or \$400,000, a year. This tax is on rubber coming into Manaus from the interior of this State (Amazonas) and does not apply to rubber going out of this port to foreign markets.

Many people here think that the law is unconstitutional, as they say the tax, instead of reverting to the benefit of the entire State, goes to the gentleman mentioned in the law and the officers of the bank, who are unknown as yet, to be used in an experimental enterprise. At certain times in the year many native houses require money to tide them over until they receive rubber from upriver. At such times in the past it has been customary to borrow money from the foreign houses here. Casually looking at the law, it appears that this bank is to be organized and run as an accommodation to the native business houses, thus taking these loans from the hands of the foreigners; but many think that a "corner" in rubber is to be attempted with the aid of this tax. It would result seriously to our very large American rubber trade if a corner could be managed controlling the rubber produced in this State. The rubber manufacturing trades of England and the continental manufacturers would also suffer.

GEO. E. PELL, *Consular Agent.*MANAOS, BRAZIL, *September 12, 1903.*

RUBBER TAX LAW.

[Inclosure.]

The Congress of Representatives of the State of Amazonas Resolve:

ARTICLE 1. To the Banco Amazonas, an institution of credit, which citizen Charles Figueiredo proposes to establish in this State, its place of business being in Manaus, is granted a right to levy a tax of 100 reis (2.5 cents) per kilogram on all rubber of every quality and 80 reis (2 cents) per kilogram on all caucho placed upon the market and belonging to the State, said right to be established by special law.

Paragraph "A." The levying of this tax shall be made recebedoria do estado, the accumulation being deposited in the treasury and properly noted and receipted, to be delivered monthly to the banco as soon as said banco shall be working with its own capital.

Paragraph "B." The concession of right granted to the banco by the present shall be for ten years.

ART. 2. The capital of the banco shall be of 2,000 contos (\$500,000), and this may be increased by the gains and by the form established in its statutes or rules.

ART. 3. Of the annual balance of the transactions, or the movements of the banco, after having deducted the amount of the general expenses of the percentage, of the incorporation, of the directorate, of the reserve fund, that shall be at the most 10 per cent of the income determined on the actual capital, which can not be more than 20 per cent; the net gain remaining shall be converted into titulos subsidiarios (sharos), which shall be distributed free of charge among the remitters of rubber in the most convenient way or manner.

* 1 conto of reis=1,000,000 reis=1,000 milreis.

ART. 4. These titulos shall receive a dividend proportionate to the gains of the banco without affecting the product of the taxes levied during the period of accumulation of balance, in order not to hinder the emission of these titulos.

ART. 5. When the dividends from the subsidiary titulos shall equal or exceed those of the shares of the actual capital they shall be equalized without distinction of class.

ART. 6. The Government shall reserve the right to appoint an inspector for the banco, who may be changed at the discretion of the Government.

Paragraph "C." The inspector shall notify the Government half yearly as to the transactions of the banco.

ART. 7. The Banco Amazonas shall continue for twenty years, and shall have a department for mortgages and commercial transactions and shall engage in any and all business permitted an institution of this nature.

ART. 8. When in the transactions of the banco there shall be a deficit proven, the directory shall notify the Government, explaining its mode of procedure and reasons for same. If these deficits shall continue for two consecutive years the banco shall not receive the tax decreed.

ART. 9. All contrary or different arrangements are revoked by this.

EXPORTS OF RUBBER FROM BRAZIL.

On July 7, 1903, United States Consul Kenneday, at Para, Brazil, sent the following figures showing the amount and destination of exports of rubber from the principal Brazilian rubber-producing sections during the season of 1902-3, which closed on June 30:

From—	To Europe.	To United States.
	<i>Pounds.</i>	<i>Pounds.</i>
Manaos	16,619,381	18,425,657
Para	13,422,609	13,686,142
Iquitos	3,578,739	.....
Serpa	22,583	.....
Total.....	33,643,312	32,111,799

UNIVERSAL IMPORTANCE OF STATISTICS.

(Translated and prepared in the Bureau of Statistics, Department of Commerce and Labor.)

Die Woche, a German magazine, in its issue of September 19, publishes a long article under the above caption, by Prof. Friedrich Zahn. It begins with the announcement that many distinguished economists and statisticians of the most highly developed countries of the world, representing practical and scientific affairs, will meet in convention in Berlin, September 20-25, to discuss the general problems of statistics. The members of this organization intend, as far as possible, to give to the different countries of the world valuable hints as to how the solution of certain problems may be obtained by statistical observations; they desire to improve the

methods of collecting, preparing, and publishing statistical materials, and also to secure greater simplicity and uniformity in the arrangement of data procured in different countries, all of which will bring about better international results.

The scientist need not be told the value of these meetings. He knows of what great service they have been in the past; he knows the needs of civilized countries regarding statistics, and what can be gained by exchange of opinion and by personal contact of statisticians. He knows, further, that a good part of the present healthy state of the financial statistics of any country, and our knowledge of its economic and social conditions, are due to the organization of statistics.

It has been asked whether statistics have any value for the general public. A number of people are of the opinion that statistics stand for a dry mass of figures; and the work of statisticians, while acknowledged to be of public and scientific value, is often regarded as tiresome and unattractive and work in which only a very exclusive circle of people find any interest. The preparation of statistics should be regarded not only as the task of the state, but each individual in the state should render such assistance as he can, otherwise success is uncertain. Only through the cooperation of all can a complete conception of relations be made possible.

The object of statistics is to prepare the quantitative phenomena of a people and to arrange them in a scientific manner after they have been carefully investigated and examined. By means of figures, statisticians fix the facts and obtain a more reliable insight into actual conditions than would be possible by means of a single event or by confused conjecture.

To the ordinary evaluations which are secured by direct observation there is added a more exact expression. In place of hollow-sounding phrases, they give us materials in accurate and easily available forms. Arbitrary prejudice, fables, rumors, and eloquent forms of speech always make way for the truth wherever and whenever carefully collected statistics are employed. The foundation of the economic and social condition of the country is obtained scientifically through statistical investigations.

As a matter of fact the government is using statistical investigation for the purpose of obtaining means of governing well, and has organized bureaus of statistics under its control for the purpose of securing their necessary assistance. Statistics give conclusions, as far as they may be reduced to figures, concerning the conditions of the country and the forces at work therein; concerning the value of certain legal and administrative measures; and also show the truth or falsity of opinions in the great world of economics; they

lead to the discovery of mistakes or weak points in the existing administrative arrangements, and often a knowledge of these conditions is the first step toward improvement. A well-organized statistical system is the economic conscience of the state. Napoleon said that political statistics were the budget of things, and without the budget there was no safety. The state, therefore, works for its own well-understood interests when it teaches its people to support and care for statistics; for these will serve it well and give it power and security in all of its other branches. It may be compared to the merchant who keeps his books carefully, as contrasted with the merchant who follows his own humors and not the actual figures of his business. The more economic and social conditions become complicated and differentiated and the more a nation takes its place as a world power in war and trade the more statistics and statistical investigations become important. There will be certain questions for the entire country to regulate, whereas formerly weighty questions were settled by the cities or by the different states that made up the nation. Therefore, the state must look to it that certain conditions shall be examined in the same way and at the same time and in the same territory, and as far as possible by means of official statisticians. They must be looked at objectively.

INDUSTRIAL FURTHER-DEVELOPMENT SCHOOLS.

(Prepared in the Bureau of Statistics, Department of Commerce and Labor.)

In its issue of October 1, 1903, *Handel und Gewerbe* says, under the above title:

The fourth session of the German society "Trade and Industry" passed the following resolutions:

"1. The establishment of a compulsory industrial further-developing school is of pressing necessity, owing to economic, social, and educational reasons. Further-developing industrial instruction is a necessary factor in industrial education.

"2. It is necessary that compulsory attendance at these schools be made general by law, and, if they are to produce good results, at least four to six hours weekly should be devoted to study. The development of the schools, in particular, should be left to law.

"3. Such schools are to serve industrial life and to satisfy the demands made on young men by professional life."

In its broader sense, therefore, every industrial school should have the character of a professional school. If possible, the classes should be arranged by professions, and only those belonging to the same or related industries, according to their previous training, should be placed in the same class. The entire system of teaching must be based, as far as the teaching force and material taught are concerned, upon the callings or trades of the students.

"4. The importance of industrial training in addition to teaching in the workshop, regard for the stage of development reached by the pupil, and his lessened capacity for receptivity on account of weariness induced in the shop demands that as far as possible instruction be given during the day.

"5. Industrial instruction demands skillful teachers and should be intrusted only to such as possess the necessary industrial training coupled with a capacity for teaching. So far as practically educated artisans comply with these qualifications, they are to be preferred for giving instruction. Opportunities should be given them to assimilate pedagogical ideas. However, sufficiently informed teachers who, when opportunities were offered, placed themselves in touch with practical ideas may and should be intrusted with this kind of instruction.

"6. Further-developing schools of guilds and societies of artisans, managed like the State schools, would be of great assistance.

"7. In the management of these schools the cooperation of artisans will strengthen the work materially.

"8. It need not be feared that the establishment of these schools will be detrimental to existing private professional schools; it is to be supposed rather that a benefit will accrue by a proper limitation.

"9. In these schools it will be possible to separate the young worker from the apprentice."

EDUCATIONAL SYSTEM OF LIBERIA.

(From Chargé d'Affaires Spurgeon, Monrovia, Liberia.)

Within the last five years the educational progress of Liberia has been very rapid and to-day conditions will compare favorably with those of any country with similar opportunities. The credit for this gratifying situation is due primarily to the interest and efforts of the officials of the Liberian Government, aided by the Colonization Society of the city of Washington, D. C., the New York Colonization Society, and the Boston Board of the College of Liberia. These several forces have directed the educational system of the Republic with such intelligent effort that in many sections the public school system is equal in effectiveness to that of many sections of the United States.

In the towns of Monrovia, Clay, Ashland, Cape Palmas, Edina, and Greenville the schools will compare favorably with some of the American city primary schools. In every civilized settlement there is a Government school. It is now proposed to open a school in every large native settlement near the cities.

Liberia College was closed for two or three years prior to 1898. The Legislature of that year passed an act making a liberal appropriation for its support and empowered the local board to resume work, and the college was reopened in 1899. Its work has gone on improving each year, until now it has four regular college classes. The senior class to be graduated soon is composed of six most promising negro youths. The sophomore class contains six young

women—daughters of prominent families. These are the first females ever entered at Liberia College. The entire number of students in the college is 160, of which 110 are in the preparatory department.

In addition to the schools conducted by the Government, a number of educational institutions are conducted by the representatives of various churches and societies of the United States and other countries, among which are those of the Protestant Episcopal Church at Cape Palmas and Cape Mount; the Methodist Episcopal Church, at Monrovia and at White Plains; the Lutherans, at Muellenburg Station, on the St. Paul River; and those of the Presbyterians, Baptists, and African Methodist Episcopal Church.

The one thing lacking to complete the system is a first-class industrial school, where experiments in agriculture, dairying, cattle raising, etc., could be made. Such an institution would be far reaching in its effect on the advancement of the African people.

JAMES ROBERT SPURGEON,
Chargé d'Affaires.

MONROVIA, LIBERIA, *August 15, 1903.*

COMMERCIAL EDUCATION FOR GIRLS IN GERMANY.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

COLOGNE.

In the advanced school for girls during the past year the first class numbered 23 and the second class 30 pupils. The course specially given during the summer semester of 1902, for the purpose of preparing girls to become teachers in commercial schools, was attended by 5 pupils. After examinations 4 accepted positions in business houses, in order to learn the practical side of business life, while the fifth was selected as a teacher in a commercial school.

The school year just commenced shows an attendance of 21 new pupils. The number of applications, however, was much larger, but the school authorities found that a great many either did not have a sufficient knowledge of the necessary elementary branches or had not reached the required age.

For the time being the school has suspended the education of girl teachers for commercial schools, for the reason that the Prussian Government has not determined the subjects to be taught and how best to provide for the girls which the schools turn out.

A museum, containing many articles of manufacture and materials of commerce, presented by interested merchants and manufacturers, has been established in connection with the school. The

teachers have found this museum of great assistance to them and depend upon it to a large extent in giving instruction from the practical standpoint.

The primary commercial school for girls was established by the women of Cologne, and is under the management of a committee appointed for that purpose. The number of girl pupils averages about 200. The subjects taught are as follows:

Single-entry book-keeping.	Double-entry book-keeping.	Typewriting.
Correspondence.	Penmanship.	Arithmetic.
Physical geography.	Commercial law.	German.
English.		French.

The ages of the pupils vary between 14 and 19 years. There are 6 male and 10 female teachers.

DÜSSELDORF.

The women's commercial school was founded by the women of Düsseldorf in 1896. The curriculum is divided into two courses, each lasting one year. The total attendance in 1902 amounted to 66 girl pupils. On the 1st of last April the Women's Union severed its connection with the commercial school, and its management has now passed entirely into the hands of the Düsseldorf Chamber of Commerce.

BERLIN.

In February, 1902, the Commercial Charitable Union for Women Employees approached the Berlin Chamber of Commerce with the proposition that the commercial schools for girls which the union had founded should pass to the management of the chamber of commerce. The commercial schools founded by the charitable union consisted of a commercial school, with instruction during the day for young girls who were unemployed, a continuation or primary school, with instruction during the evening for girl assistants, and a school for teaching typewriting.

These schools had become too large to be managed properly by the charitable union; the total attendance at the three schools had reached 800. The chamber of commerce took over the control of the three schools on October 1, 1902.

There were many reasons which influenced the chamber of commerce to take this step. The advent of women into the bureaus of merchants and manufacturers as bookkeepers, stenographers, etc., is characteristic of the present time; and the fact that there are more women than men, and that the number of unmarried women is on the increase, especially in the large cities of the Empire, makes it apparent that the plan of employing girls in business houses should

be encouraged from a moral as well as from a social standpoint. The Berlin Chamber of Commerce takes the ground that the better young women are trained to fill such positions the better will they be able to serve their principals, and their remuneration and social standing will be improved accordingly.

CASSEL.

The municipal authorities of Cassel have decided that girl apprentices and assistants in the business houses of the city should attend the two years' course of instruction given in the primary commercial school for boys. The school year 1903-4 opened with 23 girl pupils.

MUNICH.

In the Riemerschmidt Commercial School, 603 girls applied for admission in 1902, of which number 139 were rejected. This school was established by private enterprise, the city of Munich assuming control of it about two years ago. The following figures show the growth of the school:

Year.	Attend- ance.	Classes.
	<i>Number.</i>	<i>Number.</i>
1879	296	5
1900	367	7
1901	462	9
1902	464	9

The subjects taught include English, French, stenography, type-writing, history, and vocal music.

RÉSUMÉ.

It will be seen from these statements that there is an educational movement beginning in Germany which is fraught with far-reaching consequences. Berlin has set the pace, and the other cities will not be long in following suit. The same methods which have been applied with such remarkable success to the training of boy apprentices in the industrial and commercial schools of the Empire are now to be adopted for the education and training of girls who may seek to better their condition in life. They will then swell the ranks of that trained army of experts which has accomplished more than any other one factor to make German commerce and industries what they are to-day.

ERNEST L. HARRIS,
Commercial Agent.

EIBENSTOCK, GERMANY, *September 18, 1903.*

CHINESE IMMIGRATION INTO MEXICO.

(From United States Consul Canada, Veracruz, Mexico.)

The Mexican Government has decided to permit the immigration of Chinamen under certain restrictions. Every person before embarking at a Chinese port must be provided with a medical certificate legalized before the Mexican consul, or, in the absence of that official, by the American consul, certifying to the physical soundness of the applicant for passage to Mexico; the certificate to be in force for two months from date only.

The vessel bringing immigrants must be provided with suitable disinfecting apparatus, and during the voyage all clothing and baggage of the passengers must be disinfected, as well as the vessel itself, to assure the destruction of all vermin.

The vessel, cargo, and baggage must again be disinfected at the port of arrival, passengers to be placed under observation in suitable buildings erected by the China Commercial Steamship Company, at the port of Manzanillo, and to be detained there for a specified length of time at the expense of that company.

When the number of passengers on any vessel does not exceed ten, they may be landed at the ports of Acapulco, Manzanillo, Mazatlan, Guaymas, Tampico, Veracruz, and Coatzacoalcas.

Japanese arriving from Chinese or Japanese ports are also subject to the above restrictions.

WM. W. CANADA, *Consul.*

VERACRUZ, MEXICO, *October 15, 1903.*

IMMIGRATION INTO CANADA.

(From United States Consul Culver, London, Canada.)

Canada has all the elements required, save convenient coal measures, for the building up of a great and prosperous country. She has abundant water power and transportation. She has in the east splendid railroad facilities, and soon will have throughout the west and northwest railroads sufficient for the needs of the country. What she lacks is population, and this she is endeavoring in a strenuous way to secure, and with the opening up of the Northwest Territories and new Ontario it would seem that a great tide of immigration must be attracted. Even now the immigration into the Dominion is greater than at any time since the first settlement of the country.

The following figures indicate the number and nationality of declared settlers since 1898:

Nationality.	Calendar year.		Six months ended June 30, 1900.	Fiscal year.	
	1898.	1899.		1901.	1902.
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
From the United States.....	9,119	11,945	8,543	17,987	26,388
English and Welsh.....	9,475	8,576	4,129	9,401	13,095
Irish	733	1,337	343	933	1,311
Doukhobors.....		7,350			
Galicians	5,509	6,700	4,992	4,702	6,550
Scotch	1,400	747	669	1,476	2,853
Germans.....	563	780	476	984	1,048
Scandinavians	724	1,526	714	1,750	2,451
French and Belgians.....	545	413	253	492	654
Hungarians			370	546	1,048
Austrians			155	228	320
Russians and Finlanders.....			1,310	1,726	3,759
Other nationalities.....	3,832	5,169	1,941	8,924	7,902
Total.....	31,900	44,543	23,895	49,149	67,379

The trade returns for the fiscal year ended June 30, 1903, give the total value of settlers' effects for the year as \$6,442,724, \$1,117,843 coming from Great Britain and \$5,287,883 from the United States. In 1901 settlers' effects were entered to the value of \$3,740,630; in 1902, \$4,580,381.

HENRY S. CULVER, *Consul.*

LONDON, CANADA, *October 12, 1903.*

AMERICAN IMMIGRATION INTO THE CANADIAN NORTHWEST.

In the October number of the Colonizer, a monthly publication of London, England, is reproduced quite a lengthy article written by the Canadian correspondent of the Times, on the subject of American immigration into the Canadian Northwest. Among other things the writer says:

Not the least among the many factors that are contributing to the quite unprecedented prosperity now enjoyed by Canada is the steady flow of immigration which is pouring into her western Provinces from the United States. There is not the slightest doubt but that it forms one of the most substantial assets that Canada has received within recent memory, and that its high-water mark has in all probability not been reached. In the past year as many immigrants have gone into the Northwest from the United States as from Great Britain, to wit, nearly 40,000 in each case. These Americans of the second, third, or fourth generations are for reasons tolerably obvious the very best immigrants that Canada has ever received. As to this I have heard but one opinion, and, with my own knowledge of the States and Canada, never for a moment expected to hear any other. The curious thing is that, while all

former immigration into this great Northwest has come in timidly in isolated and ill-organized fashion, these shrewd Americans come in boldly, confidently, and in large companies. Now that they have made up their minds the country is a fine one—and of judges in such a matter there can be none better on earth—there is no halting, no half-hearted measures; they come by thousands, and from the very best classes in the Western and Northwestern States.

The subject, I am aware, is not wholly new in England; but let us recall once more the conditions which cause the movement. The first lies in the simple fact that all the free or cheap lands of really good quality in the States and worthy of a skillful farmer's labor have been occupied. Furthermore, the Canadian Northwest has now proved itself beyond any question a much better wheat country not merely than the Northwestern States are to-day, but than they ever were. These immigrants come mainly from Minnesota, the Dakotas, and Iowa, and in a less degree from Nebraska, Illinois, Kansas, and even Missouri. Every Canadian I have seen—and they are many—who has had to do with them speaks of them with unqualified praise. The mass of these men own farms in one or another of the States above mentioned, which were bought at prairie value or homesteaded in the seventies or early eighties, and are now worth \$40 to \$75 an acre—improved, well-cultivated farms, accessible to towns and railroads. It is a notorious fact that American immigration westward has leaped forward during periods of prosperity and each successive frontier remained comparatively stationary during the intervening periods of depression. Just now prosperity is rolling its tide westward. Buyers from the East and Middle West are stirring among the improved farms of the belt beyond them, which twenty to thirty years ago was the frontier. Prosperity, too, in America produces a certain demand for farms among the newly enriched business men of the newer towns and cities. Still, it may fairly be asked why the owner of a fine improved farm of 300 acres in Iowa should wish to leave it, even though he gets a good price, and move on to the cheap lands of remoter prairies. The answer is simple enough as regards a certain number of such people—namely, those who have sons—in that the old farm provides only for one, while for the rest of the family there is no local opening on the land whatever, except in the purchase, at a high price, of a neighboring farm which has presumably approached or reached its limit of value; but the Iowa or Dakota farmer, blessed with sons and looking prudently into the future, reflects that with the money derived from the sale of his farm he can acquire enough virgin land to settle all his family in life and have abundant capital left to build and to buy stock with.

I have talked with scores of these American immigrants, both on trains and in hotels, and with many of those who have been here a year or two on their own farms. Most of them seem to have from \$10,000 to \$15,000, some much more. Two car loads, for instance, of these people with stock, furniture, and effects went up the Edmonton line one day in the past season, representing a cash capital, so one of their number told me, of \$300,000. Nor is it only the money these Americans bring in, but quite as much the men behind the money. Anything more widely different than these men from the \$10,000 or \$15,000 amateurs from the old country could hardly be imagined.

Perhaps the most curious thing about this immigration is the methods by which it is worked. For nearly all of it is controlled and moved by land companies founded for purposes of profit by American capitalists. A big company is formed in the first instance and purchases a block of several hundred thousand acres. Small companies then buy smaller blocks from the former and retail it in farms, through real-estate agents, who go among the farmers in the various districts of Iowa, Dakota, or wherever the field is most promising. As stated above, these American companies buy immense blocks of land wherever they can secure it of

good quality and within easy reach of railroads. In all these tracts, however, every alternate section (640 acres) is the property of the government, available only as a free grant on the homestead conditions. Some of these may be already occupied, but as a rule there is very little settlement where the American companies have purchased. They acquire their land at, say, \$3 an acre, and either directly or through subcompanies bring in their settlers in wholesale fashion from south of the line. These last buy at, say, \$7, but, settling thus in communities, by the very force of their own numbers they make the land at once worth that much or more. Many, if not most of them, take up the alternate section or part of a section if available, according as the numerical strength of their family admits of a homestead or free grant. The retention of this involves at the end of three years' probation an oath of allegiance to the British Crown, and there does not seem to be the least reluctance on the part of the Americans to assume this rôle of British subject.

In conclusion, I will indicate roughly the districts of the Northwest to which these American immigrants are chiefly proceeding. Manitoba, which is still mainly a wheat-growing Province, has attracted comparatively few. Probably there are not sufficiently large blocks of cheap land any longer available for the American companies. Assiniboia has been largely patronized. In the southeast over thirty townships have been acquired by the Americans. All along the line running from the American border to Moose Jaw, near Regina, the capital of the Territories, the newcomers are settling thickly. Up the Prince Albert line from Regina, through northern Assiniboia and Saskatchewan, are three great blocks of land—one of them, I believe, a million acres—acquired by Americans for actual settlement, not to speak of smaller colonies. Alberta, however, seems upon the whole the favorite "stamping ground"—that belt of country within 100 miles of the Rockies and in sight of them, where ranching, small and great, is the main industry and grain a supplement. Edmonton, at the terminus of the branch line, some 200 miles long, running north from Calgary, on the Canadian Pacific Railroad, is a popular center with its grain-growing facilities. And, again, south of Calgary, in the direction and in the neighborhood of Fort McLeod, there has been considerable American investment. Several thousand Mormons, too, are to be found nearer the border, the best of settlers. In another place 5,000 acres are being prepared by an American syndicate for the cultivation of the sugar beet, a totally new experiment.

COTTON CRISIS IN ENGLAND.

Under date of October 1, 1903, United States Consul-General H. Clay Evans, of London, sends the following clipping from the London Daily Express of October 1, relative to the condition of the cotton-goods trade in England:

There is no change in the depressed condition of the cotton trade. Such was the report in Manchester yesterday of those best qualified to judge. It is known that some American cotton is on its way to Liverpool, but as yet the shipments are very small, and things will be much worse before they grow better.

An increase in the consignments from American ports, however, is now expected every week, and within another four weeks, say the authorities of the Master Cotton Spinners' Association, sufficient cotton will probably be received to set a good many mills running again at full time.

The distressed operatives know this also. Indeed, the thoroughness with which they know the ramifications of their industry constitutes a remarkable object lesson to those who labor in many other trades.

Theirs is a policy of waiting. Some of them have waited workless for over two months; and although they know the pangs of this cotton crisis are certain to pass before very long, they also know that with many of them suffering will grow more acute before the brighter period sets in.

UNREVEALED SUFFERING.

The reports of distress in the various towns show for the most part no change. In one or two instances, such as Macclesfield, Hyde, and Blackburn, the position is a little better, owing to several mills which had been stopped altogether having now resumed work at short time. In Bury, Rochdale, Oldham, Ashton, and Burnley, however, the number of cases requiring relief seems to grow daily.

In the Bury district, where suffering has been more acute than anywhere else owing to the cotton industry being the chief means of employment, the various relief committees are aiding between two and three thousand distressed people.

The method of relief is still a vexed question. There are many people in dire need who shrink from taking the relief tickets. It means going moneyless to the tradesmen, and they are fearful of thus exposing their poverty.

At the last meeting of the central relief committee one of the subcommittees proposed that trustworthy people should be given money instead of tickets, but the resolution was defeated, though it is known that many famishing people have tickets in their possession which they are ashamed to exchange at the shops for food.

Such is the temperament of the people of Bury, and it is the same in every other town. Cases of painful want have been unearthed every day by those who, knowing the spirit of the Lancashire workfolk, have gone to seek out the distress.

It is this independence which has made the great cotton industry and made every little home that depends upon it; and it is the same independence which is causing many little homes to be taken piecemeal to the pawnshop "sooner than we should eat," as both men and women have told the Express representative, "food we have not earned."

THE ONLY HOPE.

The minds of all who, looking beyond the present distress, are face to face with the fact that the future will see an annual recurrence of the depression are centered upon the topic of Empire-grown cotton. It is admittedly the only hope for the future, and it is satisfactory to be able to record progress in the enterprise.

Sir Alfred Jones, who is president of the British Cotton Growing Association, has stated that the movement gives much promise in West Africa. Three hundred tons of cotton have already arrived from Lagos and large quantities are accumulating for shipment.

It is expected that shortly something like 30,000 acres will be under cotton cultivation on the West African coast. It is not generally known in Lancashire that Mr. Chamberlain took a great personal interest in the enterprise when he was at the Colonial Office.

That Department has issued instructions to the authorities to see that the cotton is properly ginned before being forwarded. In other ways, since he resigned, Mr. Chamberlain has shown himself a keen advocate of Empire-grown cotton.

AFRICA'S POSSIBILITIES.

Many tons of cotton seed have been distributed and now an extensive area is under cultivation. There are many thousands of acres in the vicinity of the newly

constructed railway which are available for cotton growing, and this land will at no distant date be fields of growing cotton.

During the American civil war and also at the time of the notable cotton famine, Lagos produced large quantities of cotton, and there are many parts of the colony where the residue of this cotton is growing wild and even so is described as of fine quality.

In years to come Africa will be able to grow all the cotton which the English manufacturers require and still have a surplus for exportation.

COTTON CULTIVATION IN THE GERMAN COLONIES.

The Deutsche Industrie-Zeitung, in its issue of October 9, 1903, says:

In 1900 the colonial industrial committee took up the question of introducing cotton growing into the German colonies, and the first report of the committee, published in 1902, summarizes conditions as follows:

In Togoland, West Africa, there is as much land suitable for cotton growing as there is in Egypt, and climatic and soil conditions are favorable. A comparatively large part of the population has taken up the cultivation of cotton readily. The quality of the Togo cotton is, according to the American market, "middling," and it is capable of improvement. A profit from cotton culture by the natives seems assured as long as transportation is cheap.

The committee is interesting capitalists in the building of a railroad into the interior of Togo, which it is hoped will be commenced soon. Methods for increasing cotton culture in German East Africa are also being studied by the committee. There the conditions are different from those in Togo. The population is not large, nor is it so intelligent. Besides, it is interested in the cultivation of the oil palm.

The report states that a small area is devoted to cotton in Kamerun, German Southwest Africa, where irrigation will be an important factor in the culture of cotton; and, according to a resident of this region, the Kunen River can be used for this purpose. Already cotton culture in Ambolade is flourishing. The uncertainty of rain, however, makes it an unsafe crop, but by the diversion of the River Kunen as ideal conditions would result as are found in Egypt. Some experiments have been tried with Sea Island cotton, which have turned out fairly well.

The introduction of cotton into the German colonies will prove exceedingly valuable, as the cotton raised there will doubtlessly go to the German market; while this is the case only in a limited measure with the cotton countries of South America and Asia Minor.

For the carrying on of their work the colonial committee has been promised 500,000 marks (\$119,000). •

LIVERPOOL STEAMSHIP COMPETITION.

(From United States Consul Boyle, Liverpool, England.)

The mergerings and reorganizations that have been taking place recently have led to a keener competition between several steamship lines. The most important development has been the venture of the White Star Line and the Cunard Company into the Mediterranean business, and both lines will now endeavor to wrest some of this trade from the German companies.

An impetus has been given to the Liverpool-Canadian trade by the purchase of the Beaver Line by the Canadian Pacific Railroad. This road at the close of the St. Lawrence navigation will transfer its London fleet from London to Liverpool to run in the New Orleans cotton trade. Within the last few days an announcement has been made that a new line will shortly commence to run from Liverpool to Galveston. An effort is shortly to be made to increase the ship-building industry on the Mersey.

The total clearances from this port in 1902 were 3,002 vessels, of a tonnage of 6,314,514, and in 1901 the total clearances were 3,045 vessels and their tonnage 6,171,072. The vessels cleared show an increase of 45 and a decrease in their tonnage of 143,442.

For ports in the United States the clearances from Liverpool in 1902 were 659 vessels (of which 32 were sailing), a decrease of 106 as compared with 1901; while the tonnage of vessels clearing for United States ports in 1902 were 3,020,844 (of which 38,444 tons were sailing vessels), a decrease of 121,290 tons as compared with 1901.

JAMES BOYLE, *Consul*.

LIVERPOOL, ENGLAND, *October 6, 1903.*

MERCHANT MARINE OF FRANCE.

(From United States Consul Skinner, Marseilles, France.)

The French people face much the same problem as that confronting the United States in respect to their merchant marine. Ships are more expensive to build and to operate in France than in almost any other European country, and to overcome these inequalities a policy of direct subsidies to certain of the more important lines, and of premiums based upon services to other lines, has been in force for many years.

On April 7, 1902, the present law was passed, admitting to certain benefits new tonnage, to be limited to 500,000 tons in the case of steam vessels and to 100,000 tons in the case of sailing vessels. The law limited the premium for equipping such ships and for their navigation to 150,000,000 francs (\$28,950,000), and the same law limited the premium for the building of such ships to 50,000,000 francs (\$9,650,000), the expenditure to be applied to a maximum annual construction of 50,000 tons for steamships and 15,000 tons for sailing vessels. It now appears that shipbuilding has been carried on so actively since the passage of this law that the navigation premium of \$28,950,000 has already been absorbed by new constructions, finished or approaching completion, which amount, however, to only 403,679 tons instead of the 600,000 tons contemplated by the law. In consequence of this insufficiency of credit, several of the shipyards are closed entirely, some are running with reduced forces,

and the depression which existed in the industry a number of years ago prevails again to-day. Efforts are being made to obtain a new credit, whereby the total new tonnage may be carried to the 600,000 tons provided for in the law of 1902.

The year 1902, as compared with the previous year, showed an increase of 775,000 tons in the amount of shipping entered and cleared from the various ports of France, but as the tonnage under the French flag shows an actual decrease of 10,000 tons this increase, while great, is unsatisfactory. The unfavorable situation is plainly due to the disastrous strike which occurred in Marseilles in November and December last. Eighty-seven per cent of the general navigation movement is the proportion open to competition. Under this category the total share of the French flag, which amounted to 21.7 per cent in 1899, had fallen in 1902 to 19.2 per cent. That the approximately stationary situation of the French merchant marine is not positively worse is attributable to the trade with Algeria and the colonies and protectorates, reserved or restricted largely to French vessels. In a total movement of 4,000,000 tons with these regions foreign flags figure to the extent of only 234,000 tons, and the French flag shows an increase in 1902 of 126,485 tons over the preceding year. This favorable showing has given great encouragement to the friends of colonial development in France.

The navigation statistics for France during the year 1902 were as follows:

Flag.	Vessels entered.		Vessels cleared.	
	<i>Number.</i>	<i>Tons.</i>	<i>Number.</i>	<i>Tons.</i>
French	7,617	4,746,694	7,603	4,539,047
Foreign.....	17,327	13,622,685	13,351	9,196,335
Total	24,944	18,369,379	20,954	13,735,382

The following statement shows the entrances and clearances of vessels at the principal ports of France in 1902:

Port.	Vessels.	Tonnage.
	<i>Number.</i>	<i>Tons.</i>
Marseilles.....	7,862	9,463,872
Havre.....	3,588	3,909,237
Boulogne	3,609	3,039,965
Cherbourg	2,010	3,030,102
Bordeaux	2,361	1,782,464
Dunkirk.....	2,408	1,759,258
Calais.....	3,943	1,415,819
Rouen.....	1,740	1,069,489
Cette.....	1,600	937,562

ROBERT P. SKINNER, *Consul.*

MARSEILLES, FRANCE, *September 10, 1903.*

ROAD LOCOMOTIVES IN GERMANY.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

In a recent book entitled "Fuhrcolonne, Motorfahrzeug und Feldbahn," an instructor in the Royal Prussian War Academy in Berlin says:

An army which takes the field to-day requires an immense amount of food and rations. In order to facilitate the supply and transportation of the same, and to be in a position to utilize the large supplies of coal which the various industries of the Empire have stored up for their use, the road locomotive is destined to play a very important part in the future. In time of war railway lines as means of communication are often destroyed, thus rendering the establishment of new ones an absolute necessity. The road locomotive makes it possible within a very short time to completely change the base of supplies of an advancing army.

The road locomotive is used by the armies in Europe for a great many practical purposes. The transportation of heavy siege guns across country, the moving of the machinery of balloon detachments and iron and steel targets from place to place, not to speak of their use as engines to drive dynamos, thrashing machines, plows, etc., all show the many practical benefits of such locomotives.

In 1899, when the Boer war was well under way, the English Government ordered a large number of road locomotives from the manufacturing firm of John Fowler & Co., Magdeburg, Germany. During the progress of the war the heavy guns of the English war ships were often brought into use to support the regular field artillery. It was impossible to haul such guns across unbroken veldts with spans of oxen. The practicability of such locomotives to pioneers in a new country is apparent. In such countries as South Africa, Siberia, and the States on the lower Danube and in the agricultural districts of Prussia it is claimed that German firms are doing a good business in the sale of these machines. Their utility has often been demonstrated in plowing. With the assistance of a portable windlass, anchors, and the necessary steel-wire rope, together with a universal joint for coupling to the fly wheel of the engine, an eight-furrowed plow may easily be set in operation. This applies equally well to harrows, disks, rollers, and drawing and ditching machines.* These locomotives may be further utilized on farms for pulling down trees and hauling heavy loads of lumber, as shown in fig. 1. It may also be used to advantage in factory yards by attaching a crane.

* See also report in DAILY CONSULAR REPORTS No. 1782, entitled "The use of electric plows in Europe."

Inasmuch as the steam road roller used all over Germany in making excellent highways is an engine very similar to the road locomotive, a short description may be of interest. Fig. 2 shows the latest steam road roller with compound cylinders now in use in Germany. It may also be employed as a traction engine and can at any time be used, by means of pulleys, for driving stone crushers for road making. The tires of both the front and hind rollers are removable and can be easily changed.

ERNEST L. HARRIS,
Commercial Agent.

EIBENSTOCK, GERMANY, *September 12, 1903.*

FIG. 1.—LOCOMOTIVE AT WORK UPROOTING TREES.

FIG. 1.—STEAM ROAD ROLLER.

SIBERIA AND THE TRANS-SIBERIAN RAILWAY.

Annales des Sciences Politiques, in its issue of September 15, says that the construction of the Trans-Siberian Railway was undertaken mainly to develop the resources of Siberia, although there were political and strategical reasons also.

In 1857 an American named Collins first proposed a railway from the Amur to the village of Tchita. Later, several plans were formulated, but it was not until March 17, 1891, that the Trans-Siberian Railway was definitely determined on and projected by an imperial order. On May 19, 1891, the first stone was laid. The line covers 3,562 miles in Russian territory and 1,604 miles in Chinese territory. In ten and one-half years 5,166 miles of rails were laid. In the Canadian Pacific, constructed under similar conditions, it took ten years to lay 2,921 miles of rails. It is true that in order to construct the Trans-Siberian with such rapidity it was necessary to employ simpler means than those usually employed on Russian railways. Lighter rails were used; less ballast was put under the ties; the ties were shorter; fills, instead of being made 18 feet wide, were limited to 16.4 feet; and the grades and curves were accentuated. The Government thought thus to reduce expenses, but it was quickly perceived that this would not answer the exigencies of the case. The Government therefore proceeded immediately to replace the light rails, to lengthen the ties, and to perfect the roadbed. This, of course, meant double work and a corresponding increase of expenses.

RATES OF SPEED.

Freight trains cover the distance from Moscow to Vladivostock in fifty to sixty days, traveling at the rate of about 8 miles an hour; passenger trains make a speed of about $13\frac{1}{2}$ miles an hour. It is hoped that when the road has been perfected the freight trains will make $13\frac{1}{2}$ miles an hour and passenger trains 22 miles. The total expenses to date exceed \$391,400,000. There are yet two lines to be completed—one around Lake Baikal and the other to Khabarovsk.

Before the construction of the railway the commerce of Siberia with Russia passed almost entirely through the two towns of Toura and Tioumen. In 1891 there were exported from Toura 87,662 tons of Siberian products, and 41,565 tons imported from Russia; 80 per cent of the exports were cereals. From 1896, the commencement of regular traffic on the railway, until 1899 the number of travelers transported had increased from 417,000 to 1,075,000, and the number of tons of merchandise transported had increased from

206,452 tons to 728,939 tons; but it must be remembered that these figures include some goods destined for the railroad and for the State. The products exported are cereals, tea, beef, pork, butter, leather, hides, wood, salt, wool, eggs, game, cattle, poultry, charcoal, and cedar nuts.

By means of the Trans-Siberian Railroad, a regular communication has been established with the different rivers of Siberia, and this is particularly important for the movement of cereals, since 365,887 tons, or one-half of the total exports, were cereals.

This railroad has rendered the most appreciable services to the colonization of Siberia. This colonization has been aided by the creation of a "trans-Siberian committee," which sent out literature on Siberia and also established a number of supply houses and medical depots. The efficacy of the latter may be judged from the mortality figures of the emigrants en route—in 1894, out of 56,000, 3,000 died, while in 1899, out of 220,000, only 300 perished. From 1893 until 1899 the number of emigrants increased from 65,000 to 223,918, while the total number amounted to 968,440. The fare for emigrants is one-fourth of the regular rate. In 1900 a special commission was formed for the purpose of laying off lots for the colonists; since that time 15,506,997 acres have been laid out and 11,629,707 acres are now occupied. Every emigrant with the proper authorization receives 40.5 acres. During the first three years of residence the emigrant pays no taxes, and for the three following years he pays only one-half the legal rate. Emigrants without resources are furnished money for expenses of travel, etc. Wood is furnished them from the imperial forests. At localities where wood can not be obtained direct from the forests, depots have been established where it can be obtained at first cost.

The average annual crop of Siberia amounts to from 3,280,000 to 4,100,000 tons, of which three-fourths come from western Siberia.

It is also interesting to note the development of the commercial relations of Siberia and Japan. From 1896 until 1900 the imports from Japan had increased from \$86,440 to \$1,763,418. During the same period the exports had increased from \$656,000 to \$2,846,568.

PROPOSED RAILROADS AND CANALS IN GERMANY.

(From United States Consul Warner, Leipzig, Germany.)

New steam railroad.—Work is soon to be begun upon a railroad line between Adorf, Saxony, and Rossbach, Bohemia. This road, although it will be only about 6 miles in length, will be of great importance to Freiberg, Weidigt, Arnsgrün, and Ober and Untergettengrün, Saxon towns. It will cut a mountainous section of the

country, and be built by the Saxon government, which has appointed a committee of fifteen to consult with the Bohemian and Bavarian officials for the purpose of determining if it will not be practicable to extend the Adorf-Rossbach road on to Hof, via Posseck, a distance of about 12 miles. The committee will hold its first meeting on October 15, 1903.

Proposed electric line.—It is proposed to connect Teplitz and Klostergrab, two towns in Bohemia, a short distance from the Saxon frontier, by an electric railroad. As there is already an electric railroad from Teplitz to Eichwald, it will only be necessary in order to make the above-mentioned connection to lay 6 kilometers (3.7 miles) of new tracks.

Danube-Main Canal.—Herr Eduard Faber, a member of the Bavarian Board of Public Works, at the instance of the Society for the Improvement of Navigation upon Rivers and Canals in Bavaria, has made public a plan for building a canal to connect the Danube and Main rivers, between Kelheim and Aschaffenburg. The proposed canal would not be a new one; it would simply modernize the old "Ludwigskanal," as built by Ludwig I, from 1836–1846, which is only navigable for boats of 120 metric tons. The canal between Kelheim, Nuremberg, Fürth, and Bamberg would be 177 kilometers (110 miles) in length. It would have a fall of 266 meters (873 feet), which would necessitate the construction of either 18 sluices (12 locks and 6 elevators) or 33 simple locks. The dimensions would be the same as on the Ems-Dortmund Canal, namely, a minimum width of 18 meters (59 feet) at the bottom and 30 meters (98.4 feet) at the water level, and a depth of $2\frac{1}{2}$ meters (8.3 feet), which would permit boats of 600 metric tons making use thereof. The cost is estimated at 130,000,000 marks (\$30,940,000).

In addition to building the canal, it is proposed to make improvements upon 302 kilometers (187 miles) of the channel of the Main River, so as to make the same navigable for the 1,500-metric-ton Rhine boats. This project, it is estimated, would cost something like 95,000,000 marks (\$22,610,000).

Up to the present time, the Bavarian parliament has not manifested any enthusiasm for this new water way; nevertheless some are inclined to believe it will be realized.

BRAINARD H. WARNER, Jr.,
Consul.

LEIPZIG, GERMANY, October 8, 1903.

LOCOMOTIVE WAGE EXPENSE ON BRITISH RAILWAYS.

(From United States Consul Halstead, Birmingham, England.)

At the congress of the (British) Amalgamated Society of Railway Servants the general secretary, Mr. R. Bell—a member of Parliament—when calling attention, in his annual report, to “the great change which had been taking place during the last three or four years in the railway systems of England, the companies having concentrated their attention and effort on the loading of trains and enlarging locomotives until many of the companies had trains that performed double the work of their former class,” brought out the fact that the average wage expenses per engine worked out at £6 (\$29.20) per week, which, he assumed, included the engine driver, cleaner, shed men, and laborers. His argument that the employees having greater responsibilities under the new system should share in the pecuniary benefits was reported in the press as follows:

The full effect of that change might be observed from the following facts compiled from the railway companies' returns for the half year ended June: The 22 leading lines showed a saving in train mileage of 4,231,000 miles as compared with the corresponding period in 1900. The average train miles run per engine for the half year ended June was about 9,000. It would thus be noticed that, without taking into consideration the increase of traffic, there would be 4 per cent engines less engaged in doing the same work as that of 1900, and, in spite of the additional traffic, a less number of engines were employed to do the work. This increase in the labor and responsibilities of the engine drivers and firemen should be counterbalanced by a reduction of hours; and, taking everything into consideration, he was fully convinced that a nine-hour day for trainmen was, in the present circumstances, the maximum they should be called upon to work. The benefits derived from these great changes by the companies should be mutual, and the men should receive some consideration for their part in the production of the profits, as without the full and hearty cooperation of the employees the railway systems of this country could not be carried on in such a satisfactory manner as what they are at the present time. Lord Cawdor, chairman of the Great Western Railway Company, at the last half-yearly meeting of the shareholders pointed out that of £12,000 (\$58,398) increase in the expenses of the running department £8,000 (\$38,932) of that sum went entirely for wages of additional men who had to be employed to comply with the Board of Trade requirements in reducing the long hours of the drivers and firemen, and in accordance with the returns of the company he (Mr. Bell) found that the average wage expenses per engine works out at £6 (\$29) per week, which, he presumed, included the engine driver, fireman, cleaner, shed men, and laborers. Taking that as a basis the £8,000 (\$38,932) meant that 51 sets of men would have to be employed on that system during that half year in order to reduce the hours of labor on the whole. That may be accepted as typical of the whole system of the country, and was direct evidence of the usefulness of the society and the advantages gained from its existence by its members and railway men in general.

The president, W. G. Lorraine, stated in his speech that on the Prussian State railways the wages paid were: To foremen shunters (yard men for switching cars and making up trains), 2s. 11½d. (73 cents); to pointsmen (switchmen) and signal men, 2s. 4½d. (58 cents); ticket collectors, 2s. 4d. (57 cents); porters, 2s. 5d. (59 cents); firemen, 2s. 5½d. (60 cents); permanent way men (track or section men), 2s. 1½d. (52 cents). He did not say these were the wages per day, but it would be well understood here that it is per day and not per hour.

MARSHAL HALSTEAD, *Consul*.

BIRMINGHAM, ENGLAND, *October 8, 1903.*

BERLIN-COPENHAGEN RAILWAY.

(*From United States Consul Kehl, Stettin, Germany.*)

A new era has been opened in the passenger and freight traffic between Germany and Denmark. The two countries, since October 1, have direct through trains from Berlin to Copenhagen. The trip from Berlin to Stockholm can now be made in twenty-four hours (one hour and forty-five minutes less than via Sassnitz-Trelleborg), and from Berlin to Copenhagen in about eleven hours. Customs inspection takes place in the cars, which are equipped with every comfort and convenience. Work was commenced at Warnemünde in 1900, the project being carried out one year earlier than expected, at an expense of about 7,000,000 marks (\$1,666,000), which includes about 1,000,000 marks (\$238,000) for each of the two German ferries. The stretch of water between Warnemünde, Germany, and Gjedser, Denmark, is connected by immense train ferries, two paddle and two screw, two of which are Danish and two German. The paddle boats are 276 feet in length, with beams of 58½ feet, and carry on the center line of each 235 feet of rail. These two ships are fitted out exclusively for the passenger trains, making two trips a day each way at a speed of 14 knots, covering the distance in two hours. The other two vessels are larger, with double tracks, and fitted for ice breaking; their service will be more for the freight trade. Baltic shipowners do not look upon this new service with particular favor.

JOHN E. KEHL, *Consul*.

STETTIN, GERMANY, *October 6, 1903.*

No 280—03—6

NOTTINGHAM MUNICIPAL TRAMWAY.

(From United States Consul Mahin, Nottingham, England.)

The electric street-car service of this city is an illustration of what is possible, though not always accomplished, in "municipal ownership." Electric trams have now been in use here about two years. Previously, horse cars and omnibuses served that part of the public which did not prefer to walk. The present electric system is well-nigh perfect. The cars are large double-deckers, kept scrupulously clean and run at intervals of three to six minutes at the rate of 8 to 10 miles an hour. Practically the entire city is now covered. The fares, varying with the distances ridden, are about 2 cents a mile. The length of route is now $15\frac{1}{2}$ miles, with 30 miles of track. During the year just past the cars carried nearly 25,000,000 passengers—a traffic equal to the transportation of the whole population (250,000) twice a week throughout the year.

The receipts for the year were £115,223 (\$560,733), of which the operating expenses were slightly over 50 per cent. The gross profit was 11.41 per cent of the capital employed. After deducting loan charges, the net profit amounted to £30,852 (\$150,141), from which the rates received £18,000 (\$87,597) and the reserve fund the balance. During the two years the electrical railway has contributed £30,000 (\$145,995) to the city rates and has established a reserve fund of £20,156 (\$98,089.17).

The power for the operation of the street-car system is provided by the city's electric-supply plant. The charge is $1\frac{1}{4}$ d. ($2\frac{1}{2}$ cents) per unit.

Taking due account of depreciation and unexpected charges, it is believed that the tramways undertaking will yield a substantial yearly profit, to go toward reduction of municipal taxes, besides giving the public a highly satisfactory service at low fares.

FRANK W. MAHIN, *Consul.*

NOTTINGHAM, ENGLAND, *September 14, 1903.*

EXPRESS REGULATIONS OF MEXICO.

(From United States Consul Canada, Veracruz, Mexico.)

The following is a digest of the regulations adopted by the Mexican Government affecting the carriage of parcels by express in Mexican or foreign vessels:

Small packages of merchandise, such as are usually forwarded by regularly organized express companies, may be carried in vessels of any nationality, provided the shipping and transportation of such express matter is effected in conformity

with regulations, and that when subject to the usual coastwise tax the same shall have been paid.

By express matter is meant a package of goods, not exceeding 10 kilograms (22 pounds) in weight, of native origin or such foreign manufacture upon which the import duty has already been paid; cases or boxes containing up to and not more than one dozen bottles of wine, liquor, or spirits, each case to constitute one package, though the weight of each package may exceed 10 kilograms (22 pounds); a package or packages containing several parts of the same object, piece, machinery, or apparatus, irrespective of the weight of the same; fresh food products of whatever kind, provided the package does not exceed 50 kilograms (110 pounds) in weight; live animals, excepting horses, cattle, mules, burros, pigs, goats, and sheep; coin, bank notes, and all kinds of financial securities.

If express matter is carried in foreign vessels it shall be subject to the usual tax on freight transported between home ports, in accordance with the law of July 1, 1898; it is, however, expressly stipulated that the total weight of any one shipment by any express company shall not exceed 5,000 kilograms (11,023 pounds).

Passenger's baggage is also considered as coming under these rules, provided the same has been previously examined and passed by the customs inspectors upon its arrival at the port of departure, and when wired and sealed will not again be subject to inspection at the port of destination if the wire and seal have not been tampered with. There is no limit to the amount of baggage of passengers that may be so transported.

While these regulations provide for due protection of the revenues, they will also facilitate the business of express companies as well as that of the general public.

WM. W. CANADA, *Consul*.

VERACRUZ, MEXICO, *September 25, 1903.*

RAILROAD CONCESSION IN HONDURAS.

(From United States Consul Moe, Tegucigalpa, Honduras.)

The Government of Honduras, through its Minister of Public Works, has recently granted a concession to an American citizen, Henry A. Spears, for the construction of a railroad from the Bay of Fonseca to the town of Cantarranas, in the Department of Tegucigalpa, distant from the capital one day's ride on horseback, or 35 miles. The right of way is given for a strip of territory 80 meters (262.4 feet), except where the line runs near or through any town. The work of construction is to be begun within six months of the date of the approval by Congress, or by the executive authority, of the survey, and for the completion of the latter the grantee is allowed one year after the approval of the contract by Congress:

TERMS OF THE CONCESSION.

The grantee has the right to hypothecate the right, title, and interest in and to the railway, as well as the railway itself, to obtain loans or issue bonds for the construction of the same.

The grantee shall receive 500 hectares (1,235 acres) for every kilometer (0.6214 mile) of line constructed between the terminal points, subject to the provisions of

the land laws respecting national lands. To this end the Government obligates itself to refrain from alienating the lands to a distance of 25 kilometers (13.4 miles) either side of the railroad line, and to give provisional title thereto, which title is to be made absolute upon the completion of the railroad to Cantarranas.

Telegraph and telephone lines may be constructed by the grantee, but shall not be placed at the service of the public except after permission obtained from the Government.

For the construction and maintenance of the railway, the Government grants the following rights, exemptions, and privileges:

1. To cut and use woods of national lands, except for purposes of fuel.
2. To take and use stone, rock, lime, etc., for construction purposes.
3. To use water for power within 50 kilometers (31 miles) of the line.
4. To take and use coal and petroleum when discovered within 50 kilometers (31 miles) of the line.
5. To take and use national lands for dikes, wharves, landings, offices, stations, and workshops.

Exemption is granted from all imposts and taxes, federal or municipal, on articles used for the construction of the railway. Exemption of all employees on the road from military service is granted. The grantee may introduce foreign laborers for the work on the road, with the exception of Chinese, and such laborers shall be exempt from any and all taxes or duties on machinery, hardware, instruments, books, furniture, and personal effects.

The grantee is given the right to denounce (preempt) any mineral zone or mine which he may discover during the construction of the railway, provided it falls within 80 kilometers (49.7 miles) of either side of the same; subject, however, to the mining laws.

The grantee has the further right to construct branch lines from the trunk line wherever these shall be deemed convenient or necessary.

The mails, official correspondence, Government employees, and soldiers on public service shall be carried at half rates.

As a guaranty of the faithful execution of the contract the grantee binds himself to deposit in the general treasury the sum of 10,000 pesos (\$4,000), this sum to be forfeited if the railway is not duly constructed and opened to the public.

For the rights and privileges granted under the concession 5,000 pesos (\$2,000) is to be paid within twelve months from the approval of the concession by Congress.

It is provided that in the event of the failure of the grantee to carry out any or all of the stipulations of the contract the contract may be abrogated by the Government, and such part of the railway as is completed, with all its appurtenances, etc., may be appropriated.

The Government reserves the right to acquire the railway by purchase after the expiration of fifty years from the date of the approval of the concession by Congress. If at such time purchase shall be deemed inconvenient, then the option shall be continued and be again available at the end of every twenty-five years.

BENEFITS TO ACCRUE FROM THE RAILROAD.

The construction and operation of a railway line between the proposed terminals will be a distinct gain for the interior of Honduras. Produce which hitherto has been unavailable for export would, with moderate freight rates, enter immediately into competition with similar produce from neighboring countries. Especially is this true of coffee and a fine quality of maize.

Cantarranas is near the center of the greatest mining district in Honduras, and a railroad terminal there would greatly increase the activity of the many mineral zones, which now are little worked because of the difficulties of transportation and high rates. The country generally through which it is proposed to run the railway is wonderfully fertile in the valleys, while the extensive uplands, with their wealth of pasture, are admirably suited to cattle breeding. The climate a few miles inland from the low coast is salubrious and well adapted to the purposes of the immigrant.

BENEFITS TO AMERICAN TRADE.

Importations of American goods, usually strongly and heavily cased, will be greatly increased with facilities for cheap and rapid transportation to the interior, for the weight of American imports, carrying with them heavy duties levied on their gross bulk and requiring expensive cartage, would be neutralized by reasonable freight rates; the importation expenses thus reduced would lead to a reduction in the selling price. It needs but a slight reduction to bring our merchandise within the means of the general buying public. Only the high prices prevailing on American goods prevent the people from selecting them exclusively, for they are cognizant of the qualities and would rapidly adjust their requirements to our patterns and dimensions. A reduction in all interior freight rates such as the proposed railway should give would increase our market here at once, irrespective of the fact that other foreign goods would derive a similar benefit.

ALFRED K. MOE, *Consul.*

TEGUCIGALPA, HONDURAS, *September 30, 1903.*

TARIFF RESOLUTIONS OF CANADIAN MANUFACTURERS.

(*From United States Consul Deal, St. John's, Quebec, Canada.*)

The following resolutions were adopted by the Canadian Manufacturers' Association at its last session:

1. That we reaffirm the tariff resolution passed at the last annual meeting in Halifax, as follows:

"*Resolved*, That in the opinion of this association the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries.

"That in any such revision the interests of all sections of the community, whether of agriculture, mining, fishing, or manufacturing, should be fully considered, with a view not only to the preservation but to the further development of all these great natural industries.

"That while such a tariff should primarily be framed for Canadian interests, it should nevertheless give a substantial preference to the mother country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always that under any conditions the minimum tariff must afford adequate protection for all Canadian producers."

2. That, except in very special cases, we are opposed to the granting of bounties in Canada as a substitute for a policy of reasonable and permanent protection.

3. That we are strongly opposed to any reciprocity treaty with the United States affecting the manufacturing interests of Canada.

4. That we recommend the establishment in Canada of a permanent tariff commission of experts, who, under the direction of the Dominion government, shall have constant supervision of tariff policy and changes, and shall follow closely the workings of the Canadian tariff, with a view to making such recommendations to the government as will best conserve and advance the interests of the Dominion.

CHARLES DEAL, *Consul*.

ST. JOHN'S, CANADA, *September 30, 1903.*

NEW RUSSIAN TARIFF.

(From United States Consul Slocum, Warsaw, Russia.)

The principal changes in the proposed tariff of interest to the manufacturers of the United States are as follows, the unit for assessment being the pood (36.112 pounds):

IRON AND STEEL MANUFACTURES.

There will be an increase varying from 25 to 100 per cent additional in iron and steel manufactures to the tariff in force at present.

Machines and apparatus, complete or incomplete, fitted together or in parts, of cast iron, wrought iron, or steel, with or without parts composed of other materials, even in combination with copper to an extent not exceeding 25 per cent of the total weight of the machine, imported by the western land frontier are assessed 3.06 rubles (\$1.58) in the new tariff, against 2.10 rubles (\$1.18) in the present tariff.

Gas and naphtha motors, steam engines, portable engines except those connected with complex thrashing machines and steam plows, locomotives, locomotive wagons, steam-driven tricycles and electrical locomotives, pumps and hand fire engines, compressors, and ice-making and refrigerating machines are assessed 4.38 rubles (\$2.26) in the new tariff.

On typewriting and sewing machines the new duty will be 5.58 rubles (\$2.87).

On all machines made of copper or its alloys, or in the composition of which copper or any alloy of copper is present in a proportion exceeding 25 per cent of the total weight of the machine, the duty is raised from 6.48 rubles (\$3.34) to 10.80 rubles (\$5.56), an increase of \$2.22.

Dynamo-electrical machines and electric motors of all kinds and electrical transformers are raised from 2.10 rubles to 10.20 rubles (\$1.08 to \$5.25), an increase of \$4.17.

Agricultural machines and implements, without steam motors, not separately designated, and also models thereof, are increased from 75 kopecks to 1.26 rubles (39 cents to 65 cents).

Portable engines connected with thrashing machines and plows are increased from 75 kopecks to 90 kopecks (39 cents to 46 cents).

The following machines, etc., will be admitted free: Reaping and sheaf-binding machines; reaping machines with automatic ejectors; steam plows; complicated clover-thrashing machines with two drums; complicated steam thrashers with beater drums, in which the length of the beaters is not less than 4 feet 6 inches, and with spike drums having a length of not less than 40 inches; hay-tossing machines; raking machines, horse drawn; machines for sorting grass seed; sorting machines with spiral wire cylinders; potato-sorting machines; machines for scattering powdered fertilizers; pulverizers; bellows and injectors for vines and trees; grape-crushing machines; continuous wine-pressing machines; centrifugal cream separators and parts thereof; all kinds of newly invented or perfected agricultural machines and implements ordered by experimenting stations and museums.

CLARENCE RICE SLOCUM,

WARSAW, RUSSIA, *September 29, 1903.*

Consul.

EXPLANATORY NOTE.

The British Board of Trade, under date of April, 1903, issued a translation of the new general customs tariff of Russia, with the following explanatory note introductory thereto:

1. The tariff is not in operation at the date of publication of the translation, and no date has yet been fixed on which any portion of it is to come into force.

2. So far, as regards goods on which the rates of Russian import duties are "conventional"—i. e., are fixed by commercial treaties between Russia and other powers—no alteration of the present rates can be made until those treaties expire, unless special arrangements are made with the powers concerned. As regards other goods, the Russian Government can put the new rates in operation at any time.

3. The tariff has been prepared by the Russian Government in view of the approaching termination of commercial treaties at present existing between Russia and other powers, and the duties contained therein are liable to modification, as the result of negotiations for fresh commercial treaties. Any reductions of rates of duties on different articles that may be arranged in the course of such negotiations will apply to similar British goods imported into Russia, by virtue of the "most-favored-nation" stipulation of the Anglo-Russian treaty of 1859.

TARIFF OF COLOMBIA.

Consul C. A. Orr, of Cartagena, under date of October 1, 1903, reports that according to present exchange (\$100 paper equals \$1 United States gold) the tariff rates of Colombia per kilogram are as follows:

Class.*	Paper pesos.	United States currency.	Class.*	Paper pesos.	United States currency.
First.....	0.20	\$0.002	Ninth.....	22.50	\$0.225
Second .....	.45	.0045	Tenth	27.00	.27
Third.....	1.25	.0125	Eleventh	31.50	.315
Fourth	2.25	.0225	Twelfth	36.00	.36
Fifth	4.50	.045	Thirteenth	40.50	.405
Sixth	9.00	.09	Fourteenth.....	56.25	.5625
Seventh	13.50	.135	Fifteenth.....	67.50	.675
Eighth	18.00	.18	Sixteenth.....	112.50	1.125

* For a list of the goods included under the various classes of the tariff, see CONSULAR REPORTS No. 275 (August, 1903).

United States money is extensively used in the northern part of Colombia and in many stores prices are quoted in American gold.

PROBABLE EFFECTS OF PREFERENTIAL TARIFFS.

The Ironmonger, published at Birmingham, England, in its issue of September 19, 1903, says:

The report of the tariff committee appointed by the Birmingham Chamber of Commerce to inquire into the subject of preferential trade states that for the purposes of the investigation the committee addressed the following queries to the whole of the members of the chamber:

“1. What particular article or articles produced in your industry could be sold more largely if a preferential rate were given by the colonies?

“2. To what extent should preferential rates go in order to give a substantial advantage?

“3. What would be the probable effect of such preferential rates on the export trade with foreign countries?

“4. Would the imposition of import duties in this country affect your industry or interests, and, if so, in what manner and to what extent?”

The committee received replies to their questions from eighty-nine members of the chamber, fifty-eight of whom stated that preferential tariffs in favor of the products and manufactures of the United Kingdom would enable them to increase the sale of their goods in the colonies. Ten stated that a preference would confer no benefit—one of these asserting that, in spite of the Canadian preference, the United States still held her own in that market; two others, that they did not suffer from foreign competition in colonial markets; while a third expressed an objection to

the principle of preferential trade. Of the remaining replies, fourteen contained no expression of opinion as to the probable effect on our export trade of preferential tariffs in the colonies; three stated that they did no colonial trade; one, that such trade was of little value to them; one, that their trade was chiefly at home; and two others, that in some of the colonies the colonial manufacturers, owing to protective duties, competed successfully with British goods. It was somewhat difficult for the committee to give any authoritative statement as to the extent of preference which it would be necessary to give to British goods in order to confer a substantial advantage. The amounts stated in the replies ranged from 5 to 50 per cent. The committee, however, believed themselves to be justified in concluding that an average preference of from $33\frac{1}{3}$ to 50 per cent of the duty would give British manufacturers a material advantage.

The replies received as to the probable effect which a system of preferential tariffs with the colonies would have on our export trade with foreign countries varied considerably. Some members were of opinion that foreign countries would raise their tariffs against British goods, and others that these tariffs would be reduced. Others asserted that their goods were already effectively shut out of continental countries and the United States, while others were of opinion that any possible loss of foreign trade would be amply repaid by increased trade within the Empire. Seventy members replied to query No. 4. Many of these were of opinion that import duties in this country would be advantageous to their respective industries. Others said that such duties would affect them only in a very slight degree, while several members stated that import duties generally would have an injurious effect. Others asserted that injurious effects would follow if the cost of production were raised by an increase in the prices of food or raw material.

GERMAN-RUSSIAN COMMERCIAL TREATY.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

In view of the present negotiations between Germany and Russia, and the attempts of the former country to secure a favorable commercial treaty on the basis of the tariff passed by the Reichstag last winter, the following list may prove of interest. It not only shows the articles and products exchanged between the two nations, but will give a good idea of the subjects dealt with in the discussions:

Principal German imports from Russia.

Feathers.	Bristles.	Eggs.
Iron ore.	Horses.	Hogs.
Geese.	Fresh fish.	Flax.
Fresh meat.	Wheat.	Barley.
Oats.	Corn.	Rye.
Pease.	Wool.	Horsehair.
Hides and skins.	Hemp.	Tow.
Oakum.	Lumber.	Potatoes.
Rubber.	Caviare.	Cigarettes.
Petroleum.		

Principal German exports to Russia.

Chemicals.	Metal goods.	Hosiery.
Lead.	Books.	Drugs.
Iron products.	Explosives.	Coal.
Telegraph wire.	Watches and clocks.	Photographs.
Yarns.	Glass.	Indigo.
Instruments.	Cotton goods.	Musical instruments.
Leather goods.	Locomotives.	Beer.
Pumps.	Cranes.	Paper ware.
Silk goods.	Toys.	Sewing machines.
Wine.	Agricultural machinery.	Woolen goods.
Machinery.		

According to the *Statistische Jahrbuch für das Deutsche Reich*, German imports from Russia in 1902 amounted to \$180,975,200 and the exports to that country \$80,800,600.

The delegates of both countries have already held eighteen sessions in St. Petersburg and no agreement has as yet been reached.

A glance at the above list will show to what extent Germany is dependent upon Russia for certain raw materials. In 1900 Germany imported for her linen industries over 31,000 tons of flax, valued at \$5,000,000, fully 90 per cent of which came from Russia. Russia is in the front rank of flax-producing nations, and for several years she has supplied nearly 80 per cent of the flax tow consumed by all nations. Those who are in a position to judge claim that Russian flax is a product of inferior quality, but it can not be denied, on the other hand, that its growth forms one of the principal factors in the industrial development of the country, and is also a source of much profit to the peasant classes. There are nearly 6,000,000 acres of flax under cultivation in Russia to-day.

It will not be an easy task for Germany to conclude satisfactory commercial treaties on the basis of her new tariff. She is now experiencing some of the difficulties which were prophesied by the chambers of commerce and other merchant bodies all over the Empire during the long debates which preceded the passing of the bill.

ERNEST L. HARRIS,
Commercial Agent.

EIBENSTOCK, GERMANY, *September 9, 1903.*

IMPORT DUTIES ON MOTOR VEHICLES.

(From British Board of Trade Journal.)

The following statement shows the rates of import duty leviable on motor vehicles in the undermentioned foreign countries and British possessions, so far as particulars are contained in the official editions of the tariffs of such countries and possessions, or in other

sources of information in the possession of the commercial intelligence branch of the Board of Trade:

FOREIGN COUNTRIES.

Russia.—Motor vehicles pay duty as carriages according to kind, the motor being dutiable separately at the rate of \$3.30 per cwt. of 112 pounds. In the case of automobiles with undetachable motors, if it is impossible to ascertain from invoices or other documents what is the actual weight of the motor, such weight will be taken as equivalent to 30 per cent of the weight of the car with the motor attached. The rates of import duty on carriages of various kinds are:

Large, such as coaches, landaus, diligences, and omnibuses.....each...	\$122.04
Small, such as calashes to seat two persons, dogcarts, etc.....do.....	83.20
Vans and hand carts.....do.....	36.95

In the case of carriages completely upholstered an additional 20 per cent is levied.

Norway.—Motor cars and carriages pay duty at the rate of \$2.04 per cwt.

Germany.—Motor cars pay an import duty of 98 cents per cwt.

Belgium.—Automobiles, motor cars, etc., pay 12 per cent ad valorem; motor cars used by travelers visiting Belgium are exempt from duty.

France.—Automobiles with detachable motors pay the rates of duty on carts or carriages, according to their nature, the motors being dutiable separately. Automobile carts, wagons, etc., for trade, with undetachable motors, are dutiable as motors on their whole weight, while automobile cars and carriages with undetachable motors pay on their whole weight at the rate of duty fixed for carriages.

The rates of duty on motors are:

Gas, petroleum, hot-air, and compressed-air engines:

Weighing 551 pounds and above.....per cwt *...	\$1. 17
Weighing less than 551 pounds.....do.....	1. 96

Dynamo-electric machines:

Weighing from 22 to 110 pounds.....do.....	7. 80
Weighing from 110 to 2,204 pounds.....do.....	2. 92
Weighing from 2,204 to 4,408 pounds.....do.....	1. 96
Weighing from 4,408 to 11,020 pounds—	
Containing at least 50 per cent of cast iron.....do.....	1. 76
Containing less than 50 per cent of cast iron.....do.....	1. 96
Weighing 11,020 pounds or more—	
Containing at least 50 per cent of cast iron.....do.....	1. 17
Containing less than 50 per cent of cast iron.....do.....	1. 96

Dynamo-electric machines weighing less than 22 pounds are treated as scientific instruments and are exempt from duty.

On carriages and carts the rates of import duty are:

Carriages (other than railway or tramway carriages):

Weighing 275 pounds or more each.....per cwt...	\$4. 88
Weighing less than 275 pounds each.....do.....	11. 70

Carts and wagons for the purposes of agriculture, trade, etc.:

Hung on springs.....do.....	1. 17
Not hung on springs.....do.....	. 58

Portugal.—The rates of duty on automobiles are, at par exchange: Complete, \$131.40; incomplete, \$76.60.

* The British cwt. equals 112 pounds.

Spain.—Automobiles are dutiable as the carriages they resemble without any addition of duty for the motor. The rates of duty on carriages are:

Coaches and berlins of four seats and light carriages with two "tableros" and boxes, with or without hoods, at par exchange, \$194.66 each.

Berlins of two seats, with or without folding seats ("bigotera"), and omnibuses with more than fifteen seats, and diligences, at par exchange, \$146 each.

Four or two wheeled carriages, without "tableros," with or without hoods, and without regard to number of seats, omnibuses with not more than fifteen seats, and carriages not specified above, at par exchange, \$58.60 each.

Italy.—Automobile road carriages pay the following rates of duty:

With not more than 2 wheels, at par exchangeeach... \$8. 06

With more than 2 wheels and not more than 5 springs, at par exchange,
each..... 21. 39

With more than 2 wheels and more than 5 springs, at par exchange...each... 64. 22

In assessing duty on automobiles the motor is considered an integral part of the vehicle unless it can be separated. If the motor is separable, it pays duty separately. In the case of automobiles with electric motors, accumulators which are separable from the vehicle pay duty separately, even though the motor is not separable from the vehicle. The rates of duty on motors and accumulators are:

Accumulators, 220.4 pounds, at par exchange.....per cwt... \$0. 78

Dynamo-electric machines:

Weighing up to 2,204 pounds, at par exchange.....do..... 2. 44

Weighing more than 2,204 pounds, at par exchange..do..... 1. 56

Gas, petroleum, rotary motors, etc., at par exchange.....do..... 1. 17

Austria-Hungary.—Automobiles pay the rates of duty leviable on carriages, viz:

If without leather and not upholstered.....each... \$12. 03

If with leather work or upholstered.....do..... 36. 19

And, in addition, the following rates of duty in respect of the motor:

If containing more than 50 per cent of nonprecious metals.....per cwt... \$2. 90

If not containing more than 50 per cent of nonprecious metals:

Electric motors.....do..... 1. 21

Other kinds.....do..... 1. 81

Switzerland.—Automobiles for the conveyance of passengers pay a duty of \$1.96 per cwt., while automobiles for the conveyance of goods pay 58 cents per cwt.

Turkey.—The general rate of duty charged on all goods imported into Turkey (with a few exceptions, *e. g.*, precious metals) is 8 per cent ad valorem.

Bulgaria.—No special duty being fixed for automobiles in the Bulgarian conventional tariffs, they would be covered by the general rate of 14 per cent ad valorem.

Egypt.—Automobiles pay import duty at the general rate of 8 per cent ad valorem; certain other dues of small amount are also payable, bringing the rate up to 8½ per cent ad valorem.

China.—Automobiles, not being specifically mentioned in the Chinese tariff, would pay duty at the rate of 5 per cent ad valorem.

Philippines.—Automobiles pay import duty at the rate of \$60 each.

BRITISH POSSESSIONS.

India.—Automobiles are not separately mentioned in the tariff of India, but carriages and carts of all kinds (other than railway carriages) and, generally, articles not specified in the tariff pay 5 per cent ad valorem.

Straits Settlements.—All goods (with the exception of spirits, etc.) are free of duty.

Ceylon.—Automobiles, not being specifically named in the Ceylon tariff, would be liable to duty at the rate of $5\frac{1}{2}$ per cent ad valorem.

Mauritius.—Automobiles for agricultural purposes are duty free up to June 30, 1903; other automobiles pay duty at the rate of 10.4 per cent ad valorem.

Seychelles.—Motor cars are not mentioned in the Seychelles tariff as being subject to any special duty, nor do they appear on the free list; they would consequently pay 15 per cent ad valorem.

Hongkong.—Automobiles are free of import duty.

British New Guinea.—Automobiles, not being specially named in the tariff, would pay 5 per cent ad valorem.

Australian Commonwealth.—Motor vehicles pay 20 per cent ad valorem.

New Zealand.—Motor cars pay 20 per cent ad valorem.

Fiji.—Motor cars, whether classed with "carts and carriages" or with "articles not specified or not included in the free list," would pay import duty at the rate of $12\frac{1}{2}$ per cent ad valorem.

Falkland Islands.—In the absence of any special rate of duty, motor cars would be free.

South African customs union (Cape Colony, Natal, Orange River Colony).—Automobiles would apparently be liable to duty at the rate of 20 per cent ad valorem "as all wheeled vehicles (not otherwise enumerated) intended for the conveyance of persons or goods."

Transvaal.—As no special duty is fixed for automobiles in the Transvaal tariff, the rate payable would be $7\frac{1}{2}$ per cent ad valorem. In addition, transit duty at the rate of 3 per cent is payable in the South Africa customs union and Portuguese East Africa (Delagoa Bay) on automobiles imported en route to the Transvaal.

Lagos.—In the absence of any special duty, automobiles pay 10 per cent ad valorem.

Sierra Leone.—As automobiles do not appear in the list of articles subject to special rates of duty or in the list of exemptions, the general rate of 10 per cent ad valorem would be applicable.

Gambia.—Automobiles are not specifically named in the tariff, and would consequently pay duty at the rate of 5 per cent ad valorem.

Canada.—Automobiles are not specifically named in the Canadian tariff, but it appears from a report of the United States consul in Victoria, British Columbia, that the Canadian customs authorities treat them as "machines," not separately enumerated, and the rate of duty accordingly is $16\frac{2}{3}$ per cent ad valorem, if imported from the United Kingdom and accompanied by a certificate proving them to be of British manufacture.

Bermuda.—Automobiles, not being specially named in the tariff or in the free list, would pay 5 per cent ad valorem.

British Honduras.—So far as not comprised under the heading of "carts for agricultural purposes, trucks for use in mahogany works, carts for use in logwood works, railway and tramway plants," all of which are exempt from duty, automobiles would pay at the rate of 10 per cent ad valorem.

Bahamas.—Automobiles would apparently be dutiable at the rate of 20 per cent ad valorem, not being separately enumerated in the tariff. Railway and tramway rolling stock is duty free.

Jamaica.—Automobiles are not specifically named in the tariff, and would therefore pay $16\frac{2}{3}$ per cent ad valorem. Railway rolling stock is duty free.

Barbados.—Automobiles would apparently pay 10 per cent ad valorem, not being specifically mentioned.

Trinidad.—Railway and tramway vehicles are free of duty; automobiles for road use would pay 5 per cent ad valorem.

British Guiana.—Motor cars, not seating more than four each, pay an import duty of \$80; for each seat above, an additional \$20 is levied. A surtax of 5 per cent on the amount of duty payable is also levied.

Gibraltar and Malta.—No duty is levied on automobiles.

IMPORTS AND EXPORTS OF THE UNITED KINGDOM.

(*From United States Consul Boyle, Liverpool, England.*)

Liverpool not being a manufacturing center, but almost exclusively a receiving and exporting port, a statement of the condition of trade applicable thereto must, of necessity, be but a reflection of the general condition of affairs throughout the United Kingdom. Indeed, if the statistics of the port are merely taken on their face, erroneous conclusions might be arrived at. This observation as to possible misleading conclusions which might be drawn from bare statistics locally applies to trade generally throughout the United Kingdom. The British Blue Book for 1902 presents a very satisfactory report as to trade in the United Kingdom, yet it is a matter of common knowledge that trade in 1902 throughout the country generally was not as good as it was in 1901—that is, the home consumption of manufactures had fallen off, fewer men were employed, and wages were lower.

The total imports into the United Kingdom in the fiscal year 1902 amounted to \$2,641,956,470, against \$2,609,950,990 in 1901, an increase of \$32,005,380; the total exports were \$1,746,193,895, against \$1,739,321,340 in 1901, an increase of \$6,872,555. Liverpool shows its proportion of this increase in general imports and exports.

In regard to exports from the United Kingdom it is interesting to note that while the exports to foreign countries decreased in 1902 as compared with 1901 to the amount of \$15,093,035, the exports to the British colonies and possessions increased \$21,965,590, leaving a net increase of \$6,872,555.

The total imports into the United Kingdom from the United States in 1902 amounted to \$634,808,005, while in 1901 they amounted to \$705,077,325, a decrease of \$70,269,320; the exports to the United States in 1902, on the other hand, show an increase of \$27,129,115. The exports were valued at \$215,405,365 in 1902 and \$188,255,750 in 1901. This falling off in the imports from the United States was largely owing to the shortage of the cotton, corn, and wheat supplies and to the prohibition against cattle from New England on account

of foot-and-mouth disease. As to cotton, Egypt, to a considerable extent, has supplied the falling off from the United States, and Canada reaped the benefit of the curtailing of importations of cattle from the United States.

JAMES BOYLE, *Consul*

LIVERPOOL, ENGLAND, *October 6, 1903.*

COMMERCE OF THE BRITISH COLONIES.

The Chamber of Commerce, London, has published a report showing the total commerce, inclusive of gold and silver, of the British colonies and possessions with the United Kingdom, other British possessions, and foreign nations during each of the years from 1890 to 1900. A comparison of the position occupied in 1890 with that of 1900 is very interesting.

IMPORTS AND EXPORTS OF BRITISH COLONIES IN 1890 AND 1900.

Imports.

From—	1890.		1900.	
United Kingdom.....	£110,976,000	\$540,064,704	£116,813,000	\$568,470,464
British possessions.....	33,573,000	163,383,004	46,276,000	225,202,154
Other countries.....	51,179,000	249,062,603	80,839,000	393,402,994
Total	195,728,000	952,510,311	243,938,000	1,187,075,612

Exports.

To—	1890.		1900.	
United Kingdom.....	£85,276,000	\$414,995,654	£107,932,000	\$525,251,078
British possessions.....	33,739,000	164,190,843	43,563,000	211,999,339
Other countries.....	68,549,000	334,593,708	86,778,000	422,305,137
Total	187,564,000	912,780,205	238,273,000	1,159,555,554

These figures show that the commerce of the British colonies and possessions with foreign countries has increased in a greater proportion than that with the United Kingdom.

BRITISH FOREIGN COMMERCE.

(From United States Consul-General Evans, London, England.)

The following figures from the Daily Telegraph of September 8, covering the foreign trade of the United Kingdom for the month of August, 1903, show a balance of trade against the Kingdom for the month, as compared with the month of August, 1902, of \$54,707,538. The Telegraph says:

In the Board of Trade returns for August the main feature is the growth of the imports, which have increased 5.81 per cent. Exports, too, have materially risen, being 5.61 per cent more than in August, 1902.

Description.	August, 1903.		August, 1902.		Increase.	
Imports	£42,761,456	\$208,008,626	£40,412,571	\$196,667,776	£2,348,885	\$11,430,848
Exports	25,664,884	124,808,658	24,299,826	118,255,104	1,365,058	6,643,054

The improvement in imports is seen chiefly in articles of food and drink, but it extends to raw materials and manufactured articles. We purchased 1,325,062 cwts. (2,473,449 bushels) more wheat at an increased cost of £474,777 (\$2,310,502), principally from India, the Argentine Republic, Russia, and Canada. Larger quantities of barley and oats again came to hand from Russia, while Canada sent us more cattle and sheep. Grain and flour cost us £472,057 (\$2,297,257) more. We also paid £197,524 (\$961,251) more for wool and £339,145 (\$1,650,450) more for apparel, but our receipts of tobacco were valued at £398,766 (\$1,940,595) less. There was a decrease of £143,819 (\$699,895) in woollen fabrics and of £147,694 (\$718,753) in hides and undressed skins. Less important reductions are shown in machinery, leather and manufactures thereof, and cutlery. For the eight months the total imports have increased £1,647,196 (\$8,016,080) upon those of 1902, while compared with 1901 the increase is £2,501,011 (\$12,171,170).

Our import trade under the four principal headings for the month of August, 1903, with a statement of the increase or decrease as compared with August, 1902, appears below. In addition to our import trade for the eight months ended August 31, 1903, a statement of the increase or decrease as compared with the same period ended August 31, 1902, is given:

Imports.

Article.	August, 1903.	Increase or decrease compared with August, 1902.	For eight months ended August 31, 1903.	Increase or decrease compared with eight months ended August 31, 1902.
Food, drinks, and tobacco.....	\$95,928,428	+\$4,634,650	\$713,662,788	+\$3,574,688
Raw materials.....	57,132,242	+ 2,975,295	539,067,188	- 2,276,043
Manufactured articles.....	54,202,625	+ 3,949,477	437,301,157	+ 7,723,024
Miscellaneous	835,330	- 128,573	7,498,283	- 1,005,589

The exports, compared with August, 1902, show a gain of £1,365,058 (\$6,643,055), or 5.61 per cent, which is distributed over nearly all the items, exceptions being in the case of telegraph cables and apparatus, which have declined £328,935

(\$1,600,762), and in ships (new), where the decrease amounts to £419,892 (\$2,043,405). Our exports of coal were 248,537 tons larger, at an enhanced value of £56,903 (\$276,918); but iron and steel manufactures diminished 54,618 tons in quantity and £102,379 (\$498,225) in value. As regards yarns and textile fabrics, those of cotton have increased £639,104 (\$3,110,200) and of wool £376,117 (\$1,830,373). Cotton piece goods were shipped in larger quantities to the Continent, except Germany and Holland, and South American demands were well kept up, notably those of Chile and Argentina. As regards the East, China took more freely, while there was a falling off in Japanese requirements. India was a good customer. There was a decline in the shipments to Turkey and Egypt, as well as in those to British South Africa and British West Africa.

The imports of bullion and specie during the month of August amounted to \$11,720,274, against \$10,407,004 for the month of August, 1902, and the exports of bullion and specie amounted to \$15,651,070, against \$7,359,902 for August, 1902

H. CLAY EVANS,
Consul-General.

LONDON, ENGLAND, *September 8, 1903.*

BRITISH FOREIGN AND COLONIAL TRADE.

United States Consul Marshal Halstead transmits to the Department an extract from the Birmingham (England) Post of September 17, 1903, containing a long and interesting review of the statistical report of the Board of Trade, showing the foreign and colonial trade of the United Kingdom for the years 1890, 1894, 1898, and 1902, from which the tables of trade figures have been compiled in the Bureau of Statistics, Department of Commerce and Labor.

The following table shows the value of exports, manufactured or partly manufactured in the United Kingdom (excluding articles of food and drink, tobacco, and ships), to foreign countries and British possessions during four years:

Country.	1890.	1894.	1898.	1902.
Germany	\$77,620,675	\$70,877,575	\$91,499,933	\$80,014,993
Belgium	32,926,739	33,233,329	37,457,451	34,362,356
Holland	45,706,168	39,598,711	42,270,419	33,233,326
France	61,011,310	49,321,977	48,898,592	49,881,625
Russia	22,624,358	27,408,128	37,379,586	30,216,090
Italy	25,529,659	14,813,626	15,606,866	17,412,337
United States.....	141,561,619	80,122,056	61,045,376	91,741,022
Total	406,980,528	315,305,402	334,158,223	339,861,761
All other foreign countries.....	321,296,064	258,487,014	263,467,443	300,988,156
Total to foreign countries.....	728,276,592	573,794,416	597,625,666	640,849,919
British India.....	156,161,119	135,901,879	138,962,908	150,243,455
Self-governing colonies.....	172,838,614	134,300,809	171,612,256	254,084,832
Other British colonies and posses- sions	56,203,208	49,278,179	55,628,961	62,656,188
Total to British colonies and possessions	385,202,941	319,480,858	366,204,125	466,984,474
Grand total.....	1,113,479,533	893,275,274	963,829,791	1,107,834,393

The following table shows the imports into the United Kingdom of articles manufactured or partly manufactured (excluding articles of food and drink and tobacco) from the undermentioned foreign countries during the same years:

Country.	1890.		1894.	
	Manufactures.	Total imports.	Manufactures.	Total imports.
Germany	\$45,976,668	\$126,885,865	\$50,377,322	\$130,784,608
Belgium	61,710,977	84,598,146	58,925,441	82,985,524
Holland	75,174,675	126,046,847	78,354,495	134,346,531
France.....	125,789,321	218,156,182	121,966,549	211,449,785
Russia	13,520,300	115,583,599	14,260,436	114,843,307
Italy.....	9,496,424	15,056,552	8,654,311	15,228,121
United States.....	50,026,010	473,186,093	52,627,810	436,072,466
Total	381,697,375	1,157,513,284	385,166,364	1,125,710,342

Country.	1898.		1902.	
	Manufactures.	Total imports.	Manufactures.	Total imports.
Germany	\$59,536,314	\$138,861,485	\$78,141,873	\$163,679,647
Belgium	79,620,407	104,796,734	110,660,404	129,248,201
Holland	74,911,709	138,855,377	96,291,036	169,561,163
France	152,167,873	250,122,493	151,209,056	246,453,809
Russia	15,351,845	94,845,720	15,012,199	124,942,317
Italy.....	8,774,339	16,216,215	9,263,315	17,433,000
United States.....	85,418,341	613,481,477	101,858,896	617,858,631
Total	475,780,828	1,357,179,501	562,436,779	1,469,176,768

The above table shows that the percentage of the manufactures to the total imports for the United Kingdom for the year 1890 was 44.5, while the percentage for 1902 was 46.3. The increase from 1890 to 1902, inclusive of both manufactures and total imports from the above seven countries, was greatest from the United States. The total imports for 1902 was \$1,469,176,768; of this amount \$617,858,631 was imported from the United States, while the total imports from the other six countries amounted to \$851,318,137. This is remarkable when it is considered that the table excludes articles of food and drink and tobacco, and taking into consideration the following statement: The total imports of food and drink for the year 1902 was \$911,325,123; of this amount \$179,208,863 was imported from British possessions and \$732,116,269 from foreign countries. The Post adds:

It is a noticeable fact that live animals for food were last year imported from only two British colonies—Canada and the Channel Islands—and only one foreign country, the United States.

DEPRESSION IN THE BRITISH HOSIERY INDUSTRY.

(From United States Consul Mahin, Nottingham, England.)

Manufacturers of hosiery in this city (Nottingham) have just had some correspondence with Mr. Joseph Chamberlain which is especially interesting as showing that the exports of hosiery from this city to the United States, which up to 1890 were valued at about \$1,500,000 a year, dropped in value immediately upon the enactment of the McKinley tariff law to less than \$1,000,000 a year. Until 1897 the value fluctuated between \$400,000 and \$900,000 a year, and then upon the enactment of the Dingley law it suddenly fell to less than \$200,000 and has not in any year since reached \$300,000.

The effect of tariff legislation in the United States on wages in the British hosiery industry is thus described in a letter from a manufacturer:

In 1883 a change was made in the tariff of the United States. From that year to the beginning of 1886 there was a scarcity of employment; in fact, for the years mentioned the men employed in the hose and half-hose branches would not work more than three days a week. The immediate effect of the tariff was shortness of work; the ultimate result was a rearrangement of our price lists in 1886, when the prices were reduced to such an extent that the men's average wage, which would be 50s. (\$12.017) in 1883, after the prices were revised in 1886 were reduced to 42s. (\$10.12) per week.

This was not the only evil caused by the tariff. A number of firms removed their machinery into the country districts in order to obtain cheap labor, and these firms, competing with the town manufacturers, made the men's position considerably worse, so far as continuity of employment and wages were concerned. However, the men made an honest attempt by readjusting their prices to enable the manufacturers to again sell in the American markets. This was successful to a great extent, as you will notice by the exports of hosiery from Nottingham to America during the years from 1883 to 1890.

In 1890 came the worst blow to the hosiery trade in my recollection—the passing of the McKinley act—which has been the means of practically excluding several branches of the trade from the American markets. This act was again followed by a long period of depression, culminating with another large reduction in prices in 1896, and the average wage, which was prior to 1890 42s. (\$10.12) per week, was reduced by something like an average of 7s. (\$1.70) per week, the average being now for the whole of the trade 35s. (\$8.51) per week.

Another act, known as the Dingley act, came into operation in 1897, but both manufacturers and workmen recognized that wages and prices had fallen as low as they possibly could, and no further attempt has been made to reduce wages in order to get into the American markets.

To aggravate the case still more, the United States, it is asserted in the correspondence, is now exporting considerable quantities of hosiery to this country, with “every appearance of this importation

rapidly increasing." But the worst competition is from Germany. A Nottingham manufacturer writes:

I go to London to sell our goods and find the buyers going through, to put it mildly, thousands of German samples before they look at the English goods, not because they are unpatriotic, but because the foreign goods are so much cheaper. They must do so, and in order to obtain delivery for the season's trade they are compelled to place orders in bulk and in good time. The unfortunate Englishman gets his orders or not, as the case may be, afterwards, and has to dribble in his goods as best he may and hold them over for the convenience of his customer, who, perhaps, if the season should prove to be a bad one, only takes in half the order, because he is stocked with the German goods which he has been obliged to accept.

Statistics are given which show that the imports of woollen hosiery from continental countries to England have increased 25 per cent and of cotton hosiery 100 per cent in the last five years, while the aggregate exports of woollen hosiery from England (figures for cotton hosiery are not given) have declined 25 per cent in the same time.

It is claimed in the correspondence that German hosiery is "dumped" on the English market at less than cost price. The following is extracted from one of the letters:

We take the liberty of sending you a specimen dozen of ladies' cotton vests, made in Germany, of which many thousands of dozens have been sent into this country during the past twelve months, at a price which would little more than cover the cost of the yarn from which the goods are made, so that the items of labor, bleaching and dyeing, trimming, finishing, boxing, carriage, and commission paid to the English agent, to say nothing of depreciation of machinery, administrative expenses, and profit, are all ignored. This dozen of vests, which is only one item out of very many, speaks much more eloquently on the dumping question as it affects English manufacturers than anything we can say.

Apart from dumping, the lower wages and longer hours of work on the Continent enable manufacturers to produce more cheaply than we can, in addition to which they export to this country immense quantities of regular goods at lower prices than they obtain for the same lines in their own protected markets.

One writer says, to controvert an assertion by Sir Edward Grey that protection is desired only by those manufacturers whose machinery is obsolete:

Nottingham manufacturers are not obsolete. They are a keen, up-to-date class. Our firm is constantly adding the most recent machinery, otherwise it would not be possible to exist at all; but such is the enormous quantity of German goods put upon the English market it is impossible for master or man to make a fair living wage, and each year it becomes worse. If we do not get some form of protection, then in the course of twenty-five years—and possibly much sooner—the Nottingham hosiery trade will be a thing of the past and will follow the silk trade of the country. This must be typical of many manufacturing trades, no doubt, but I only speak of what I know. We want—the country wants—practical business men to tackle this question, if England is to retain her manufacturers. At the present time one-third of the hosiery machinery in Nottingham is standing, and that not "obsolete" or "out of date," but modern.

A writer in this discussion who favors free trade doubts if the American tariffs have caused the decline in Nottingham hosiery exports, because those from Germany to the United States seem to be unaffected, and he gives figures showing that Germany sends nearly thirty times as much cotton hosiery to the United States as England does. The writer believes that Germany's cheaper cost of production, due to lower wages and longer working hours, accounts for this remarkable difference.

That this industry is extraordinarily depressed in England is beyond doubt, whatever may be the cause. In its current issue, the *Hosiery Trade Journal*, published at Leicester, in this district, says:

The knitting industry, generally speaking, has, at the present time, reached a critical stage. Few departments can boast of any remunerative business on hand, while the reports from others are of a most serious character. "Such conditions as now exist have not been known for the past thirty years," is the report of a well-known authority. Manufacturers can not accept orders at anything like old prices, while merchants refrain from placing orders at the advance necessary. In the underwear department this is felt most keenly, owing to the heavier character of the goods. Merchants report that they are doing a little more business with the retailers and express hopes for improvement in the near future. We also hope that this may be the case; but from present reports it is not likely that our hopes will be realized for some time to come to such an extent as to place the trade on a satisfactory basis again.

FRANK W. MAHIN, *Consul*.

NOTTINGHAM, ENGLAND, *September 2, 1903*.

BRITISH SHOE AND LEATHER TRADE.

The Shoe and Leather Record, of London, England, in the issue of September 11, publishes the following statistics of the shoe and leather trade for the month of August, 1903, as compared with the same period last year, and a comparative statement of the first eight months of 1902 and 1903.

The export of shoes for August, 1903, was 74,205 dozen pairs, valued at \$892,166, as compared with 59,603 dozen pairs, valued at \$709,142, for August, 1902. The improvement is in the main due to an increase of 9,000 dozen pairs exported to South Africa and to smaller increases to the East Indies, New Zealand, and the West Indies. The shoe exports to Australia decreased about 1,000 dozen pairs as compared with August, 1902.

For the eight months ended August 31, 1903, and for the same months of the two preceding years the value of the exports and imports of foot wear is shown in the following tables:

Exports.

Country.	1901.	1902.	1903.
Brazil	\$94,361	\$69,430	\$48,189
British South Africa.....	2,411,697	3,447,580	4,101,598
British East Indies.....	369,538	360,603	438,540
Australia	801,036	414,587	360,535
New Zealand.....	358,618	241,398	290,287
British West Indies and Guiana.....	176,240	150,896	184,333
Other countries.....	714,573	733,576	804,452
Total	4,926,063	5,418,070	6,227,934

Imports.

Description.	1901.	1902.	1903.
Imports	\$3,183,095	\$2,932,942	\$3,139,123
Reexports	187,000	171,787	187,983
Net imports.....	2,996,095	2,761,155	2,951,139

IMPORTS AND EXPORTS OF LEATHER.

The imports of leather during August, 1903, totaled 9,508,028 pounds, of the value of \$3,087,493, and the reexports 1,404,480 pounds, of the value of \$584,715. In August, 1902, the imports were 12,628,224 pounds, valued at \$3,499,593, and the reexports 1,529,136 pounds, valued at \$620,810.

Details of the imports and reexports for the eight months of 1903, with the figures for the corresponding periods of 1901 and 1902, are given in the following table:

Imports.

Country.	1901.	1902.	1903.
France	\$2,802,082	\$2,779,356	\$2,989,330
United States	10,675,685	11,492,342	10,971,553
British East Indies.....	8,613,744	5,777,183	6,811,655
Australia	1,918,841	1,540,578	1,574,975
New Zealand.....	334,815	381,821	278,369
Other countries.....	3,177,562	3,604,982	3,807,822
Total	27,522,729	25,576,262	26,433,704
Reexports.....	5,311,459	3,777,046	4,274,422
Balance for home consumption.....	22,211,270	21,799,216	22,159,282

British tanned, tawed, or dressed leather exports for August, 1903, were 1,283,520 pounds, valued at \$620,221, against 1,041,376 pounds, valued at \$475,579, in August, 1902. Exports for the eight months of 1903 were 10,623,312 pounds, valued at \$4,794,393, against 9,063,488 pounds, valued at \$4,126,213, for the same period in 1902.

It will be seen from the above table that the United States is much the largest exporter of leather to Great Britain. The figures

also show that the United States made the largest gain in 1903 over 1901; in fact, France is the only other country which shows an increase.

The following table shows the total exports of leather and manufactures of from the United States to the United Kingdom for the years ended June 30, 1901, 1902, and 1903:

Article.	1901.	1902.	1903.
Leather	\$14,874,297	\$15,835,928	\$16,402,392
Boots and shoes.....	1,552,623	2,013,890	2,128,958
Harness and saddles.....	11,995	17,773	17,758
All other manufactures of leather.....	95,825	110,419	143,174
Total	16,534,740	17,978,010	18,692,282

FOREIGN MEAT AND CATTLE IN THE UNITED KINGDOM.

(From United States Consul Boyle, Liverpool, England.)

Owing to the enormous number of cattle sent from Canada to make up for the American deficiency, the price of meat at wholesale has recently been very low, but the consumers have not been much benefited thereby.

The government of New Zealand has had in contemplation a plan for the establishment of meat depots, where the products of the colony would be sold at cost price; but the British wholesale and retail butchers are up in arms against the proposition, and so serious has this opposition become that the government of New Zealand is still hesitating about carrying out its plans. The removal of the restrictions from American cattle (from the States of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island) will, it is expected, still further glut the market, and it is doubtful whether the dealers will be able much longer to obtain present prices. The prohibition on the importation of cattle from the Argentine Republic was removed early in the year but was subsequently re-established, and the trade from that date has become thoroughly disorganized.

During the year 1902, 324,431 head of cattle and 203,289 sheep were landed at this port from the United States; also 1,228,700 quarters, equal to 324,881,584 pounds, of chilled beef. Owing to the prohibition of the importation into this country of live stock from the Argentine Republic shipments of dressed beef from that country have developed considerably, and this has affected the American chilled-beef shipments to a very large extent.

The following is a summary of supplies of beef, mutton, and lamb from all sources available for consumption in the United Kingdom for 1902:

Home fed:	Tons.
Beef (estimated).....	761, 000
Mutton and lamb (estimated).....	322, 000
Imported:	
Live cattle.....	135, 000
Live sheep.....	8, 000
Chilled beef.....	185, 369
Chilled mutton and lamb.....	182, 979
Total.....	1, 594, 348

Owing to the high prices ruling in the United States for bacon and hams, there was a very considerable shrinkage in the quantities imported during 1902, especially toward the latter part of the year, when the effect of the high prices curtailing consumption came to be more acutely felt. Canada is a much stronger competitor with bacon from the United States than formerly, and Canadian bacon was imported in much larger quantities during 1902; the prices at times were actually lower than the prices of American bacon, though usually, owing to its leanness and superior quality (from an English standpoint) it brings from \$1.21 to \$1.94 more per cwt. (112 pounds).

JAMES BOYLE, *Consul.*

LIVERPOOL, ENGLAND, *October 6, 1903.*

ENGLISH CHINA CLAY.

(*From United States Consul Boyle, Liverpool, England.*)

Since the "shipping combine" was effected, no matter relating to British or Anglo-American trade has attracted so much attention in this country as a statement recently published in a London paper to the effect that an American syndicate was about to purchase and to "corner" all the famous china and blue-ball clay mines in Dorsetshire, Devonshire, and Cornwall. As is well known, that part of England has practically a natural monopoly in this country of certain valuable clays used largely in the manufacture of the best classes of pottery. The news that an American syndicate was about to control the supply created consternation, particularly throughout the pottery districts, and much relief was expressed when it was learned that the story was unfounded. The subject-matter is a very interesting one, however, in the United States as in England, and is

well set out in the following article from the London Daily Telegraph of September 9, 1903:

When it was proposed to levy an export duty on coal, partly with a view of conserving our supplies of fuel, it was suggested by a Staffordshire member that it was even more important to levy a tax on the shipment of china clay. Indeed, he went the length of declaring that so important are the mines to the pottery industry of the country that it would be wise if we prohibited the export of the raw material altogether. This advice was not taken, and to-day we are in presence of a mild scare—happily found to be based upon the flimsiest grounds—lest the Americans should have covert designs upon the china clay of Cornwall and the blue-ball clay of Devonshire. There is no doubt that these counties do possess mineral treasures which the Americans naturally covet. In their own country they are entirely without the very fine china clay which so largely enters into the composition of the best pottery and which has given the English industry a world-wide repute. The Americans have coarser forms of clay, which enable them to produce kitchen ware and the commoner classes of goods, but for the production of a superior article they are practically dependent upon importations from Cornwall. There is, therefore, every ground why they should desire to get control of the supplies, but there is no reason to believe that they have had, or are likely to have, any success in that direction. It is quite possible that the rumors which have lately been circulated had their origin in the fact that some time ago a proposal was made that an English syndicate should be formed to control the china-clay output. But the attempt ended in failure, perhaps because the task was too big. Anyhow, the confidence with which North Staffordshire smiles at recent reports is reassuring.

One of the oddest things is that the supplies of the best china and blue-ball clays should be confined to the districts which have been named. It is true that similar deposits have cropped up here and there, but not to an extent to justify their development, and the result is that to-day the southwest of England holds a monopoly. But it is a monopoly divided among a great many persons. If one takes up the directory he finds that the china-clay merchants in Cornwall, Dorset, and Devonshire consist of about sixty firms. Perhaps some of them have identical interests, but probably there are at least fifty independent firms engaged in the production of china and blue-ball clay. It would obviously take a great deal of money to consolidate the interests of all these firms and so tie up the production in such a way as to put up the price to any considerable extent. It has rather been suggested that there are no men of wealth among the producers of china clay, and that they would be almost bound to succumb to financial temptation. It is doubtful, however, whether this is in any way a true representation of the facts, for an industry which has hardly a competitor can scarcely be in a helpless condition. On the other hand, it would undoubtedly be a very awkward thing for the British pottery trade if the foreigner ever managed to carry out the design which has been attributed to him. China clay and blue clay, respectively, enter so largely into the composition of our pottery that the diversion of supplies would be all but fatal. It is desirable to give a few examples. Take an earthenware "body" of the type employed, perhaps, in the production of ordinary dinner ware. Out of 48 inches, to quote the technical description of the ingredients, 21 are ball clay, 14 china clay, 8 flint, and 5 china stone. Take, next, white granite earthenware of the nonchip-pable hotel type. Out of 36 inches, 12½ are of ball clay and of china clay, respectively, 6¼ are flint, and 4¼ are stone. When we come to china "bodies," ball clay is not required. In this case the manufacturers want china clay, the finer material, and instead of ball clay they use calcined bone. Bone, by the way, is the distinguishing mark of British china. On the Continent they use flint. Obviously,

if the supply either of china or ball clay was subjected to American engineering, the position of the English pottery trade might be a very disagreeable one.

In some trades the tendency of recent years has been for manufacturers to produce their own raw material. For instance, there are shipbuilders who manufacture their own steel instead of buying it ready made. But apparently it has never been the fashion in the pottery industry for the manufacturers to produce their own clay, at all events to the extent of controlling the output in Cornwall and Devonshire. To begin with, North Staffordshire is a good distance off—so far, indeed, as to make it a little difficult to understand at the first blush why the manufacture is carried on there instead of at the place where the raw material is to be had. The explanation of the riddle, if riddle it be, is that coal is to be had cheaply in North Staffordshire, and that it costs less to bring the raw material to the coal than to take the coal to the raw material. Thus it happens that Cornwall sends its china clay by sea to Runcorn, whence it is carried by canal barges right into Staffordshire. This plan has been found to answer in years past, and probably is quite good enough for future following.

No actual record seems to be kept of the output of the British pottery trade, and this circumstance has been a difficulty with those who wish to weigh the case for or against protection in connection with the industry. It may be said, however, that there are, roughly speaking, 500 manufacturers in North Staffordshire, and that outside there are perhaps not more than 100 others. Burton produces a certain amount of yellow ware, and so also does Newcastle-on-Tyne. Glasgow also turns out earthenware, and Bristol furnishes stoneware. In addition, there are a few firms in Yorkshire who make earthenware. All alike are very largely dependent upon Cornwall and Devonshire, except the yellow-ware firms, who obtain the great part of their supplies locally. One hears varying accounts of the condition of the pottery industry from time to time, but there can be very little doubt that its general position is a strong one, thanks to the raw material which Cornwall and Devonshire supply. Take the American trade, for example. The Americans, as has already been suggested, import a certain amount of clay from us and pay a comparatively small duty upon it when it gets across the Atlantic. When, however, British-made china seeks to enter the American market it has to pay a duty of from 50 to 60 per cent. Notwithstanding this, however, the exports from this country to the States are actually increasing. If we take the figures for the first six months of this year and compare them with those for the same period of 1902, we find that the exports of china and earthen ware to the United States increased in value from £277,000 (\$1,348,020) to £302,000 (\$1,469,683). Such figures afford very clear indication that the Americans have still to do a great deal in the way of developing their earthenware industry before they can dispense with us. Of course, if they rob us of our clays they could do the thing easily enough. What happens in America is very much that which occurs in other parts of the world. North Staffordshire has to be called in to supply the best china and earthen ware. Even Germany takes a large amount from us, although she competes in our home market with some of the cheaper classes of goods. An interesting point is that there are some firms producing china clay who sell very little of it to the potteries. They supply paper makers, who largely use it, and they also furnish it to the textile trade, which employs it for "loading" cotton fabrics. Consequently, it is not solely the pottery manufacture which would be affected if the Americans were able to effect a corner.

It is not improbable that the mere rumor of American scheming will do something to stimulate the interest of Staffordshire manufacturers in the fiscal question which is now under discussion. Not a few of them, it is believed, would favor the imposition of such an export duty on china clay as would be almost prohibitive in

character. But as there are some producers of clay who ship perhaps as much and possibly more to the United States than to Staffordshire, it would seem natural that they should find compensation for a loss of market in a bigger demand, or perhaps higher prices, at home. If the pottery manufacturer paid more for his clay he would possibly have to charge more for his goods, and to that extent the British consumer would suffer. On the other hand, there are those who argue that a stiff export duty on clay would give the British earthenware manufacturer such a powerful position in foreign markets that he would be well able to treat both British consumer and British clay producer with the utmost consideration. At any rate, it is conceivable that the flutter which has just been created may serve a useful purpose in suggesting that there are cases in which restriction upon the exportation of our raw materials may be a subject well worthy of discussion.

JAMES BOYLE, *Consul*.

LIVERPOOL, ENGLAND, *September 11, 1903.*

FAILURE OF THE ENGLISH POTATO CROP.

The following is taken from the October 17, 1903, issue of the *Yorkshire Post*, Leeds, England:

To find a parallel for the serious outbreak of disease among the potato crop we must go back to the black years 1877-1879, or even to the years of 1872-73, when the Regent potato, from which many growers had made their fortunes, utterly failed. Never during the last twenty-five years has disease been so general among all classes of the crops nor so universal in its geographical distribution, and many farmers in Southeast Yorkshire and Lincolnshire are threatened with financial losses only equaled in the years referred to. Some idea of the ravages of the disease may be gathered from the fact that a moderate calculation, based on a careful investigation of the two great potato districts of Yorkshire and Lincolnshire, is that at least a third of the total crop is irretrievably ruined. Many merchants put their estimates at one-half hopelessly bad and fully a third of the remainder affected.

The disease appeared in the first instance early in August, and is described by many growers as affecting the potato haulm as if it were struck by a blight. The tiny white specks which first appeared spoke ominously for the future of the crop, but no one at that time anticipated so serious or widespread a result. The continuous rains, however, have helped the disease to spread from the tops to the eyes of the tubers, where it quickly develops. The longer the potatoes remained in the ground the more the disease extended. Some hope was cherished at first that the disease might be found to be only partial, but as soon as "lifting" operations were commenced it was found to be universal.

Crops planted on high sand lands have fared best, the plight of the farmers on the low-lying, strong warp lands is pitiable indeed. Many have only been able to make ends meet by reason of the earnings of the potatoes balancing the losses on corn. Nothing but ruin stares these unfortunate men in the face.

The better the quality the more susceptible to disease would appear to be the lesson of the epidemic. The coarser kidney potatoes have made a much better fight, and those farmers who have sown the secondary sorts—the long and oval potatoes generally utilized for "chippers"—will have good cause to be thankful; they will undoubtedly reap a golden harvest.

In the failure of the British crop, recourse will again be had to France and Germany. Already several growers and dealers in a large way are in Magdeburg buying up large quantities of the Saxon products, and important shipments of Silesian potatoes are being arranged for from Stettin, while the splendid crops reported in Belgium and the Lille district of France will be drawn upon to supply the English market. In view of the possibility of drawing large foreign supplies and the uncertainty which prevails of an apparently good crop being deliverable in anything like condition, the English market is practically paralyzed. Roughly speaking, what few lots have been sold have brought from 15s. to £1 (\$3.65 to \$4.86) a ton above the normal level of last year's prices.

CONDITION OF THE BRITISH STEEL INDUSTRY.

Under date of October 2, 1903, United States Consul-General H. Clay Evans, of London, sends the following correspondence printed in the London Daily Express on the present and prospective situation of the British steel industry:

Among the more important industries of Great Britain which have of late been seriously affected by our present fiscal system of so-called free trade, none have greater reason to complain of being sacrificed on the altar of an ancient fetish than that of iron and steel manufacture.

If existing conditions should be continued no trade has more reason to dread the future. Whether it be the northern maker of ship steel or pig iron, the Derbyshire pipe founder, or the South Wales tin-plate-bar producer—all have the same tale to tell of unfair competition from abroad in their domestic markets.

In order to realize the huge and rapidly growing import of foreign iron and steel into this country, it is only necessary to state that whereas the quantity in 1900 was 761,402 tons, for the first eight months only of 1903 it had reached the total of 817,537 tons, an equivalent of nearly 1,250,000 tons per annum, and this without taking into consideration the probability of a further increase from now until the end of the year.

By far the greater portion of this large quantity came from Germany, as America has had enough to do latterly to satisfy home requirements. But the Steel Corporation's London agents have recently been instructed to take orders in this country.

Every thinking Englishman who has been to the States and has studied American conditions will tell you that competition from that quarter is to be feared more than from Germany.

INCREASING IMPORTS.

In fact, what is there under existing fiscal conditions to prevent our present annual import of 1,250,000 tons being increased to 3,000,000 or 4,000,000 tons in the not very distant future, or, indeed, to prevent the British steel trade from being wiped out altogether?

It will be of interest to deal with the actual position of the steel trade to-day in such an important center of manufacture as South Wales and Monmouthshire, a district which possesses two of the most necessary natural qualifications for the economic production of iron, viz, proximity to the seaboard and to fuel which in quality is probably unsurpassed the world over. Let us discover why its manufacturers as a whole are unable to hold their own in the large market at their very door.

Although the steel productions of South Wales comprise railway material, which is an important branch of manufacture at several of the larger establishments, it is its principal product of a semifinished steel known as "tin-plate bars" which comes mainly within the scope of this article.

Until 1898 tin-plate and galvanized-sheet manufacturers drew practically all their supplies of raw steel (in the shape of bars) from the local works; and, although prices waxed and waned according to the natural ebb and flow of trade, they never fell for any length of time to a lower point than that at which fairly up-to-date works could profitably produce them.

Just when the recent trade boom had reached its zenith, however, cargoes of American bars first made their appearance in the district, and were freely offered at £2 (\$9.73) per ton under local quotations. The result of this was complete demoralization of the market. Owing to the high values of fuel, ore, and pig iron then ruling, local steel makers were quite unable to meet the competition.

FROM BAD TO WORSE.

Although, of course, prices have fallen all round considerably since that time, this relative condition exists to-day and is gradually growing worse. The only difference is that German competition has entirely supplanted American during the last two or three years—for reasons already stated—and the extent of the imports may be gauged by the fact that the port of Newport alone has this year received an average of 18,055 tons per month of foreign bars and billets, the exact quantity for August, 1903, being 21,658 tons, as against 7,965 in the same month last year.

The prices of these bars fluctuate considerably, and even for brief periods have approached those of the home producers. As a general rule, however, the foreign material has been sold in South Wales at anything from 5s. (\$1.22) to 12s. 6d. (\$3.04) per ton under the figure which Welsh makers could afford to accept.

There is an additional factor to be reckoned with in competition from Germany, and that is the preferential rates granted by the State railways on iron, steel, and other goods destined for export, and which practically amounts to a small Government bounty. Railway rates as a whole, however, are decidedly lower there than in England, and with this further rebate will be remarked another advantage the German exporter has over his British rival.

Now, the effect of all this upon the British steel maker is not difficult to estimate. He is simply being gradually driven out of the market—some works are stopped or running short time, men are out of employment, and even tin-plate makers and other consumers of this and similar semifinished material, who themselves own steel works, have found it more profitable at times to close down the latter and buy German bars and billets. This renders capital unproductive and prevents workmen from obtaining their full wages.

Unless some powerful assistance in the shape of fiscal reform is forthcoming the trade must rapidly decline; and a little later still, dependent industries, which doubtless now consider themselves more or less impregnable from outside attack, will find that our trans-Atlantic and Teuton friends (who will then be practically controllers of their raw material) will be able to deal with them piecemeal in the same way, sending the finished article instead.

Thus would pass away an important trade, which, in conjunction with other valuable industries, has contributed so largely to make Britain what she is. And without such industries she would undoubtedly quickly fall to the level of an agricultural State.

COMMERCIAL AND INDUSTRIAL EDUCATION IN ENGLAND.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

It is a remarkable fact, acknowledged even by Englishmen, that in the country whose commerce, so to speak, controls the world commercial education up until a few years ago was neglected. In 1901 the foreign commerce of the United Kingdom amounted to \$2,540,264,000 imports and \$1,692,880,000 exports. The imports, therefore, were \$847,384,000 in excess of the exports. To these figures must be added the Kingdom's great internal commerce. No exact statistics are available, but it may be assumed that the internal commerce of the United Kingdom is equal to its exports and imports together.

In addition to this, one must take into consideration England's enormous maritime commerce. The total tonnage of her merchant marine, including only those vessels of more than 50 tons capacity, is about equal to the total tonnage of the merchant marines of all the other nations in the world. Not only is almost the entire foreign commerce of England carried in her own ships, but a very large percentage of the commerce of other countries finds its way into the holds of the British vessels. It is estimated that the profits of British shipowners amount to \$300,000,000 a year.

The reason that commercial education has received but little attention in England till now is because the people have a highly developed instinct for trade. Then, again, the geographical position of the country, together with a combination of circumstances, has greatly assisted England to become the first commercial nation in the world. In Germany, France, Austria, and other nations of Europe the unfavorable geographical position and adverse circumstances have awakened the people of those countries to a realization of the fact that it is only a superior educational training that will put the merchants and manufacturers in a position to compete with those of England.

Ten years' residence and study in Germany has led me to the belief that this Empire's greatest capital is its intelligence. A process of rigid training has not only enabled Germany to overcome the disadvantages of her geographical position, but the merchants and manufacturers in England find themselves face to face with the fact that German commerce has much more rapidly increased than their own, and that many markets in different parts of the world are being lost to their German competitors.

One result of the neglect of commercial education in England is the inability of English commercial travelers and agents to properly represent the trade interests of their country. As a rule, these vital interests are in the hands of foreigners who have received special commercial training in some one of the many excellent commercial schools on the Continent. It would be difficult to estimate how many young Germans are managing the correspondence in large English business houses. A good percentage of this number, however, after they have learned the English language and as much about the industry or business of their employer as possible, find their way back to Germany again, where they exert themselves to further the commercial and industrial interests of their native country. The advent of Germany upon the scene as one of her keenest competitors has caused some anxiety in England, and the cause which has brought about this result is now generally and correctly conceded to be the superior technical and commercial training accorded to the German youth.

In 1888 the London Chamber of Commerce took the first step to change this condition of affairs. A committee was appointed which worked out some "schemes for junior and higher commercial education." This programme was accepted, not only by the London Chamber of Commerce, but by the consolidated chambers of commerce of England, Wales, Scotland, and Ireland. It takes six years to complete the course, which embodies the following subjects:

English.	Writing.	French.
German.	Spanish.	Portuguese.
Italian.	History.	Geography.
Arithmetic.	Geometry.	Elementary science.
Physics.	Chemistry.	Natural history.
Geology.	Accounts.	Bookkeeping.
Commercial law.	Political economy.	Drawing.

The course is for boys between the ages of 10 and 17. The number of hours of instruction averages thirty a week. At the end of each year final examinations are held and the subjects taught during the year are thoroughly reviewed. At the end of the six years' course the pupil is given a so-called "junior commercial certificate."

The scheme for a senior commercial course is intended for pupils between 15 and 19 years of age who have the time to devote to this course. The subjects of the course are as follows:

Latin.	Mathematics.	Commercial geography.
History of commerce.	Political economy.	Banking and currency.
Drawing.	Photography.	Mechanics.
Zoology.	Stenography.	Typewriting.

The modern languages and literature of the junior course are also continued in the senior course. If the student is already in possession of the junior commercial certificate, he may become a candidate for final examinations, and receive, after the same are completed, the higher commercial certificate.

As a means toward interesting the youth of London in the school of the chamber of commerce, some 300 London merchants declared themselves willing to show a preference for the young men holding junior and senior certificates in filling vacant positions in their firms.

COMMERCIAL INSTRUCTION IN ELEMENTARY SCHOOLS.

Commercial education in England, when considered as a whole, is almost entirely in connection with existing schools organized for general instruction. The neglect of this subject is probably the cause of more such schools not having been founded independently instead of being attached in the form of special classes to the elementary and secondary schools and to some universities.

Special attention is paid in England to commercial subjects in connection with the evening elementary schools. These are the schools which correspond to the primary commercial schools in Germany. In England they are called "continuation schools," are under the control of the education department, and receive their funds through Government subventions. The establishment of these schools dates back to about the year 1850, but a law passed in 1893 greatly assisted their growth. This law permits school boards to establish evening schools wherever a need for the same exists. Almost everything is taught which may be of possible benefit to the pupil in after life. The number of subjects taught is remarkably large, as it covers almost everything from modern languages and mathematics down to cooking and washing.

In 1885 only 24,233 pupils attended these schools. In 1895 the number of schools was 2,619 and the attendance had increased to 164,233 pupils. In 1898 the number of schools and pupils had increased to 3,477 and 254,943, respectively. In the city of London alone there are 368 evening continuation schools, with an attendance of about 15,000 pupils. In 1895, 6 per cent of the population of Bradford attended the evening school in that city.

The board of education has divided the instruction given in these schools into eight stages, as follows:

- Elementary.*—Reading, recitations, writing, composition, and arithmetic.
- English.*—English language, geography, history, and literature.
- Languages.*—French, German, Welsh, and Latin.
- Mathematics.*—Euclid, algebra, and mensuration.

Science.—Physics, chemistry, domestic science, science of common things, mechanics, electricity, physiology, botany, agriculture, and horticulture.

Commercial.—Commercial arithmetic, bookkeeping, commercial geography, history of commerce, office routine, and stenography.

Miscellaneous.—Vocal music, drawing, etc.

Subjects for women and girls.—Housekeeping, cooking, etc.

The usual age of the pupils is about fourteen, but persons over twenty may also be admitted. The hours of instruction shall not begin before 4 o'clock in the afternoon. In the 368 evening continuation schools of London, instruction in bookkeeping, commercial arithmetic, and typewriting is given free of charge. In 1894 the education department for England and Wales granted the sum of \$500,000 as subventions to these schools. The same department for Scotland spent \$100,000 and Ireland \$50,000 for this purpose.

In the elementary day schools German, French, bookkeeping, and commercial correspondence are taught.

COMMERCIAL EDUCATION IN THE SECONDARY SCHOOLS.

The secondary, or intermediate, schools in England are divided into two parts, namely, "classical side" and "modern side." Commercial instruction is given in connection with the latter. The following is the course of study offered in the modern side of King Edward's Grammar School for Boys in Birmingham, and will serve as an example by which to judge the others:

Reading.	Writing.	Arithmetic.
English.	History.	Geography.
French.	German.	Science.
Drawing.	Vocal music.	Physical instruction.
Latin.	Mathematics.	Scripture.

The courses of study in this class of schools in England vary greatly, and there seems to be no definite plan of organization in existence. In the above-named school there are at present 360 pupils whose parents, for the most part, are employed in the large business houses of the city. Sixty-five per cent of the pupils come from the elementary schools, and any boy who lives within 10 miles of the Birmingham town hall has a right to apply for admission. As these schools are usually well attended, it sometimes happens that candidates are refused admittance; but it must be borne in mind that there are several grammar schools in Birmingham, and that prospective pupils invariably find room in some one of the commercial classes connected with these schools. In addition to commercial instruction in the grammar schools, there are a large number of independent schools in England which enjoy about the same relative standing.

COMMERCIAL EDUCATION IN UNIVERSITIES.

London School of Economics and Political Science.—This institution was founded in 1895, after the pattern of Columbia College in New York. It has a department intended to provide for higher commercial education—that is to say, young men who wish to become merchants, bankers, and manufacturers may have the same facilities for broader study which the professional schools give to the students of law and medicine. The course of instruction is intended to give the student a deep insight into the development of modern commerce in all its phases, especial attention being paid to the trade relations of England with foreign countries. The subjects of the curriculum which have to do with commerce and trade are as follows:

- 1. The organization and structure of modern industry historically considered. Thirty lectures.
- 2. The economic position of England, with special reference to rural organizations, the iron and steel trades, and smaller manufactures. Thirty lectures.
- 3. The organization of English foreign trade. Ten lectures.
- 4. Chartered companies, past and present. Ten lectures.
- 5. The commercial and financial relations between England and Ireland from the period of the Restoration. Ten lectures.
- 6. Industrial and commercial law. Thirty lectures.
- 7. English foreign trade, with special reference to China and South America. Thirty lectures.
- 8. French commercial history since 1860. Six lectures.
- 9. The economic factors in railway administration. Ten lectures.
- 10. The railway statistics of England and foreign countries comparatively treated. Twelve lectures.
- 11. Electric traction on railways. Six lectures.
- 12. The railways of France. Ten lectures.
- 13. Life contingencies, and the theory and practice of life assurance. Twenty lectures.
- 14. The finance of life assurance, and special points in life-assurance administration. Three lectures.

In 1900 this school was attended by more than 400 students ranging between the ages of 23 and 28 years. Forty per cent of this number heard lectures in the department of commerce and industry, as follows:

Subject.	Percent-age.
Banking and insurance.....	16
Commerce and industry in general.....	10
Railway administration.....	14
Total	40

This school has been attended with such success that it promises to become in London what the Handelshochschulen of Leipzig and Cologne have become to those cities. The railroads in England are

taking such an interest in the school that many of them send their clerical employees to London, at the expense of the railway company, in order that they may attend certain lecture courses. The founding of this school undoubtedly marks an epoch in the history of commercial education in England.

University of Birmingham.—On the 1st of October, 1902, the commercial department in this institution was formally opened. In regard to the aim and scope of the programme, the latest catalogue says:

The instruction provided by the faculty of commerce furnishes a systematic training, extending over a period of three years. It consists of courses of study of two kinds. Some deal with subjects which are primarily of concern to the future man of business, but which are, nevertheless, capable of being made the instruments of a true education. Others deal with subjects which have long been recognized as elements of liberal culture, and yet are peculiarly valuable for those who are to be engaged in commerce and manufacture. While certain parts of the curriculum are believed to be serviceable for all classes of business men, and are prescribed for all students in the faculty, other parts are so arranged as to allow a large freedom of choice, in accordance with the prospects, interests, and aptitudes of the individual students.

The subjects which deal with commerce are as follows:

- Commercial law.
- Transport.
- Technique of trade.
- Money, credit, banking, and international exchange.
- Methods of statistics.
- The British Empire, with particular regard to existing circumstances in the colonies and dependencies.
- The United States, Germany, Russia, France, other European countries, South America, etc.
- Commercial history.
- Commercial geography.
- Business policy in its main principles, as indicated by industrial and commercial experience.
- Public finance.
- Bookkeeping.
- Executorship, accounts, including probate and residuary accounts.
- Bankruptcy, liquidation, and receivership accounts.
- The preparation of accounts for income-tax returns and appeals.

TECHNICAL EDUCATION.

Advanced technical education has been neglected. Leading English statesmen, however, have always been more or less aware of their country's deficiency in this respect. As long ago as 1865 the Government requested her diplomatic representatives to prepare papers on the subject of technical education in foreign countries.

Some speeches were made in Parliament on the subject and a resolution was passed favoring the establishment of a technical university at Government expense, but nothing came of it. Up to date England has been without an institution of this kind. The technical courses given in Kensington, Leeds, Glasgow, Belfast, Galway, etc., in no wise make good this glaring deficiency, and it was only recently decided to establish in London a polytechnicum modeled after the one in Charlottenburg, Germany.

In 1877 a movement was started in England to organize industrial schools for textiles. The trade journals of the country began an aggressive campaign in favor of the scheme, and such schools were finally established in Leeds, Glasgow, Stroud, Dewsbury, Bradford, and Huddersfield. A trade journal at that time contained the following instructive article, which a lapse of twenty-seven years has only confirmed:

That state which possesses the best industrial schools will be master of the world's markets. * * * It is technical education which has enabled France to supply us with a considerable portion of printed cretonnes, calicoes, and other textile fabrics, together with bronzes and articles in which artistic art is involved; it is technical education which enables Saxony to send us yarns, which enables Belgium to supplant our spinners to a great extent in both woolen and worsted yarns; it is technical education which has taught the chemists of Germany to supply this country with four-fifths of all the aniline dyestuffs used by our dyers and printers. They obtain nearly all their supplies of raw materials from London, Hull, and Leith, whence they are shipped via Rotterdam up the Rhine, only to be returned to this country in the shape of dyes ready for use. Two of these establishments employ between them about 25,000 hands and about 60 technically trained chemists. They have suites of laboratories for investigation, research, and for testing colors, dyes, etc. The success of these and similar works abroad is due to the superior scientific skill employed in them, both as regards principals and assistants, and not to a cheaper system of labor than that which exists in England. A thorough study of the subject one is working in is the true way to success.

Much is being done in England, however, for primary education. The annual Government expenditure for this purpose amounts to \$4,000,000, and this sum is greatly increased by the yearly donations of the ancient guilds of the city of London and donations from other sources. The youth of London and of other large cities and industrial centers may receive technical education to-day in almost any known trade or industry.

ERNEST L. HARRIS,
Commercial Agent.

EIBENSTOCK, GERMANY, *September 4, 1903.*

LAWS GOVERNING IMPORTATIONS INTO THE UNITED KINGDOM.

(From United States Consul-General Evans, London, England.)

In view of the communications which reach this office, from time to time, from exporters in the United States complaining that their goods are stopped at ports in the United Kingdom by the British customs officials in consequence of some irregularity or nonobservance of the laws here governing the marks required to be placed on importations, under the merchandise marks act, I transmit herewith for publication:

1. Copy of a printed memorandum respecting marks on goods imported for home consumption.
2. Copy of general order 15, 1900, containing regulations on the subject.

I trust that the publication of these laws and regulations will prevent, in some degree, the delays incurred through unintentional nonobservance or ignorance of these laws.

LONDON, ENGLAND, *September 25, 1903.*

H. CLAY EVANS,
Consul-General.

MEMORANDUM RESPECTING MARKS ON GOODS IMPORTED INTO THE UNITED KINGDOM FOR HOME CONSUMPTION.

1. Foreign goods imported into the United Kingdom which do not bear any marks whatever, either on the goods themselves or on the packages or wrappers containing them, are not required to bear any qualifying statement or indication, such as "Made abroad," "Made in Germany," etc.
2. Foreign manufactured goods bearing a name or trade-mark, being, or purporting to be, the name or trade-mark of a manufacturer, etc., in the United Kingdom, must have that name or trade-mark accompanied by a definite indication of the country of origin of the goods. The name of the country is a sufficient indication, without the words "made in," if a name or trade-mark only appears—*e. g.*, "John Smith, Germany," would be satisfactory. If such a mark as "John Smith, Sheffield," is used, then the qualification must be "Made in Germany," or similar wording.
3. If foreign imported goods bear the name of a place identical with, or a colorable imitation of, the name of a place in the United Kingdom, the name should be accompanied by the name of the country in which the place is situated. Thus Boston, in Massachusetts, should be accompanied by the name "United States" or by the initials "U. S. A."
4. If a trade description includes the name of a place, and the goods on which it appears are not the produce of that place or of the country in which it is situated, the trade description must be accompanied by a statement indicating the actual country of production. For instance, a wine, the produce of Germany, and described as "port" or "sherry" (which words include the names of the places

Oporto and Xeres), should have that description accompanied by the statement "Produced in Germany," or should be described as "German port" or "German sherry." An exception to this rule is made in cases where the name of a place in a trade description is indicative merely of the character of the goods, and is not calculated to mislead as to the country of origin. Thus, such a description as "Brussels carpet" or "Portland cement" need not be accompanied by a statement of the country of actual production.

5. Trade descriptions in the English language applied to foreign goods imported for home consumption from non-English-speaking countries are not regarded as indirect indications that the goods are British or Irish origin, unless the officers have good ground for considering that such trade descriptions are specially designed to convey, and do in fact convey, an impression of British or Irish origin for the goods.

Trade descriptions on imported goods in a foreign language, which is not that of the country from which the goods are imported, must be accompanied by a statement of the actual country of production of the goods, *e. g.*, "Made in Germany."

6. As regards watches, any mark on the case is deemed to extend to the watch. If, therefore, a watch case is made in this country, and bears any statement or indication of such origin (as, for instance, a British hall-mark), and the watch itself is made in Switzerland, then there must appear on the plate of the watch a statement or indication that it is of Swiss origin.

7. All qualifying statements or indications must be distinct, in equally conspicuous characters with, and in proximity to, the marks they are intended to qualify.

8. Marks on samples or patterns, whether of British or foreign manufacture, are not required to be accompanied by any qualification, provided such samples or patterns are valueless in themselves, do not form whole or complete articles, and can be readily distinguished as samples or patterns.

CUSTOM-HOUSE, LONDON, *January 28, 1898.*

MERCHANDISE MARKS ACT, 1887—CONSOLIDATED INSTRUCTIONS.

(General order 15, 1900.)

The following consolidation of the general orders and other instructions on the subject of the merchandise marks act of 1887 is issued for the information and guidance of the officers.

1. The regulations made by the board under section 16 of the merchandise marks act, 1887, will be found following these instructions.

GOODS WITHOUT MARKS.

2. Goods imported into the United Kingdom which do not bear any marks whatever, either on the goods themselves or on the coverings containing them, are not subject in any way to the act, and therefore need not bear any statement or indication, such as "Made abroad," "Made in Germany," etc.

3. Although the act draws no special distinction, except as regards the requirement of qualification in certain cases under section 16, between goods prohibited on account of marks suggesting British origin and goods prohibited on other goods, for the purposes of customs administration it is convenient to deal with them separately. The goods, therefore, prohibited under the act to which the attention of officers is called may be classed under two heads:

(A) Goods with marks which suggest British origin and require, in order to legalize their importation, some counteracting qualification (paragraph 4).

(B) Goods with marks prohibited on other grounds (paragraph 19).

It is to be noted that by section 1 of the merchandise marks act, 1891 (54 Vict., c. 15), the customs entry relating to imported goods shall, for the purposes of the merchandise marks act, 1887, be deemed to be a trade description applied to the goods.

(A) GOODS WITH MARKS SUGGESTING BRITISH ORIGIN.

4. Goods falling under (A) may be again subdivided:

(a) Goods, whether manufactured or raw, having applied to them any description, figures, words, or marks, or arrangement or combination thereof, which by being or including, either expressly or by reference, the name of a place in or a part of the United Kingdom (*e. g.*, "Irish"="of Ireland"), or in any other way, constitute a statement or other indication, direct or indirect, that the goods were made or produced in the United Kingdom.

(b) Goods of foreign manufacture bearing any name or mark which is or purports to be the name or trade-mark of a manufacturer, dealer, or trader in the United Kingdom.

(c) Goods, whether manufactured or raw, having applied to them a generally used trade description which in indicating a particular class of goods or method of manufacture includes expressly the name of a place in or a part of the United Kingdom, and is thereby calculated to mislead as to the place of the manufacture or production of the goods. This class, though in fact only a case of (a), is dealt with specially by the act (section 18).

5. (A) (b) relates to manufactured goods and not to entirely raw goods, and the word "purports" is to be understood as referring to any name or names reasonably suggesting a British manufacturer, dealer, or trader, whether the name is or is not known to the officer; or as referring to a trade-mark, not being merely matter of decoration or ornament, which reasonably suggests itself as British by containing English wording or other representation specially designed to convey, and in fact conveying, an impression of British manufacture.

6. As to (c), that the words "trade description, which, in indicating a particular class of goods or method of manufacture, includes the name of a place in or a part of the United Kingdom, and is thereby calculated to mislead"—see 4 (c)—mean such terms as Kidderminster carpets, "Balbriggan" on hosiery, or "Shetland" on shawls, and the like, which, although they might be held to be merely phrases descriptive of method of manufacture, are yet calculated to mislead as to place of origin. Where, however, such a description has become associated with a particular class of goods in a manner practically to preclude any probability of deception, as "Portland cement" and "Bath chaps," the description need not be accompanied by a statement of the country of actual production. This applies also to the case of colonial names describing, for instance, classes of wool, etc., where, although the names are British, the circumstances preclude mistake.

7. All such goods as above specified are to be detained and reported to the board unless they are qualified as follows:

As to (a), by a definite indication of make or production out of the United Kingdom.

As to (b), by a definite indication of the country in which the goods were made.

As to (c), by the name of the country in which the goods were actually made or produced, with a statement that they were made or produced there.

8. With regard to (a), "Made abroad" will be generally sufficient. With regard to (b), the name of the country is a sufficient indication, without the words "Made in," if the name or trade-mark only appears. Where there is an address, as "John Smith, Sheffield," then the qualification must be "Made in Germany," or similar wording; "Germany" alone would not counteract "Sheffield;" (c) requires the full statement "Made in Germany."

9. Officers are not expected to decide whether goods were actually made or produced in the country from which in the qualification they are stated to come; the name of some foreign country or of some place in a foreign country is sufficient.

10. If the goods bear the name of a place identical with or a colorable imitation of the name of a place in the United Kingdom, the name should be accompanied by the name of the country in which the place is situated. Thus Boston, in Massachusetts, should be accompanied by the name "United States" or by the initials "U. S. A.," or even by the abridgment "Mass."

11. The use of the English language applied as a description to goods imported from non-English-speaking countries is not, simply as language and where not involving the name of any place in or part of the United Kingdom, a "direct," and, as a rule, is not to be regarded as an "indirect," indication of British origin. Where, however, there is good ground for considering that the use of the language was specially designed to convey, and does in fact convey, an impression of such origin, then the language will be a description within (a) of paragraph 4.

Initials.

12. "Initials" under the act, though not treated as names generally, are to be so treated in certain cases, of which the following are all of which the officers need take cognizance:

(i) Where the initials are followed by affixes distinctly suggesting a British firm, as "& Co.," from countries where that affix is not used, which includes all the continental countries except Germany, and "Brothers" or "Bros.," or the like, which applies to all non-English-speaking countries. This holds as to all goods, whether manufactured or raw; but in respect of baskets and the like, holding raw fruit, eggs, etc., and sent to and from the Continent, the rule, when the baskets, etc., will not meet the eyes of retail buyers, is not strictly applied.

(ii) Where, in respect of manufactured goods, the name or mark of a manufacturer, dealer, or trader in the United Kingdom is prohibited, on foreign goods, even his own property, without a definite qualification, the initials will fall within the prohibition if they are easily recognizable as those of persons or firms so well known as to make the initials practically equivalent to the name itself; and also, where they are the initials of known consignees of the goods who will bring them into consumption in the same "coverings." Where the consignees are not known, and no special fact calls attention to the goods, they may, as regards initials, be passed.

Packing cases and coverings.

13. Goods will not be liable to detention when the name of a port or place of destination is applied to mere packing cases or outer wrappers in which goods are clearly not intended to be sold or exposed for sale, or if exposed for sale, then in an export market. Address marks, when they are merely and manifestly such, for purposes of carriage only, are not marks within the act.

14. "Coverings," such as boxes, capsules, bottles, etc., are to be judged with discrimination as to whether the marks, if any, on them refer to them or to the goods they are to cover. If the marks on them refer, as is rarely the case, distinctly to the coverings, the case should be reserved for the board. If the marks, such as Royal Arms, or the like, refer to the goods to be covered, and it is shown to the satisfaction of the officer that they will be British goods, or goods as to which British marks are not objectionable, and do not refer to the coverings themselves, then the coverings may be regarded as not contrary to the act.

15. This principle will apply to coverings (such as ornamental boxes for tobacco, tea, or confectionery) with names on them of firms who have ordered the coverings

for their own goods, or where such firms, though not having actually ordered the coverings themselves, consent in writing to their importation for such goods.

Grain sacks.

16. The name and address of a merchant in this country upon grain sacks are to be regarded as an indication that the grain is of British origin, and will require the addition of a statement of the country of production. In the case of grain imported in bulk and transferred after due entry and clearance into sacks on board the importing ship, such marking of the sacks need not be qualified with a statement of the foreign origin of the grain.

Samples, etc.

17. Samples or patterns, readily distinguished as such, and valueless in themselves, are not to be treated as under the act so far as British origin is concerned.

Goods not produced in the United Kingdom.

18. Goods not produced in the United Kingdom, such as wine, tea, and other produce not grown in this country, such as linseed, rape seed, etc., are also treated as not under the act, so far as British origin is concerned. This is applied, further, to some special forms of manufacture which, by shape, make, or color, can not be mistaken for the manufacture here of the same article, as, for instance, Dutch cheese of the kind well-known to be made in Holland, bearing the initials of British dealers.

(B) GOODS PROHIBITED ON OTHER GROUNDS.

19. Goods prohibited on grounds other than marking suggestive of British origin are those which, whether manufactured or raw, have applied to them a false trade description—

(a) As to the place or country in which they were made or produced.

(b) As to trade-marks or names so as to constitute forgery.

(c) As to number, quantity, measure, gauge or weight, and mode of manufacture or material.

(d) As to being the subject of any existing patent, privilege, or copyright.

20. As to (a), this relates, of course (British origin having been dealt with above), to questions between two foreign countries—that is to say, to goods with marks indicating make or production in a place or country which is not that in which the goods were made or produced. The act does not specify particularly what is to be the qualification here; but if the mark indicates, expressly or by reference, a place or country not that, in reality, of the make or production of the goods, there must be a definite qualification to the effect that the goods were not made or produced in the place or country indicated, or a definite indication of the place or country in which the goods were made or produced.

21. A mark which, though not naming, includes the name of a place or country is to be held as naming such place or country. For instance, a wine, the produce of Germany, and described as “port” or “sherry” (which words include the names of the places Oporto and Xeres), should have that description accompanied by the statement “Produced in Germany” or should be described as “German port” or “Australian sherry,” etc. Such a mark as “Lancashire Swedish” on Swedish iron, where the qualifying word follows the misleading name, may be admitted. As in marks suggesting British origin, exception to this rule is made in cases where the name of a place in a trade description is indicative merely of the character of the goods and is not calculated to mislead as to the country of origin. The description “Brussels carpet” is an exception of this kind.

22. For judging between two foreign countries the act provides that, in the absence of proof to the contrary, the port of shipment of goods shall be *prima facie* evidence of the place or country in which the goods were made or produced; and this rule the officers can, generally, act upon. Where, however, the port of shipment is merely an ordinary trading route from some inland country, as Rotterdam or Antwerp with respect to Germany, or Hamburg with respect to Austria, the officers may, if they have no reason to doubt the good faith of the importer, accept the statement that the goods are the make or produce of the inland country.

23. The use of language of one foreign country on goods of another must not be viewed more strictly than its use in cases indicating British origin, dealt with in paragraph 11. The use of a certain language is allowed freely to all countries when, by custom, that language is usually applied to such goods—*e. g.*, Spanish on tobacco and cigars, when the recognized words are applied only to color, shape, size, and the like; or French on sardines, when confined to the words “Sardines à l’huile,” without any additional French description.

24. The forging of a trade-mark—par. 19 (*b*)—is the application to goods of any figure, words, or marks, or arrangement or combination thereof, reasonably calculated to lead persons to believe that the goods are the manufacture or the merchandise of some person other than the person whose manufacture or merchandise they really are, and this includes the name or initials of a person. The figures, words, or marks applied need not be an actual trade-mark, or actual name or initials, provided they are a colorable imitation of the mark, name, or initials of a person carrying on business in connection with goods of the same description and are used without his authority.

REGISTRATION.

25. As to goods under all the three heads (*b*), (*c*), and (*d*) of paragraph 19, the difficulty of detection by officers, without special information and more particular examination than is ordinarily bestowed for revenue purposes, is greater than in the case of goods falling under (*a*), but as regards the forging of trade-marks (*b*), as above explained, while it would not be possible for officers to enter into the examination of all names and marks so as to detect fraud of this kind, the board have, nevertheless, felt that a manufacturer, dealer, or trader who has reason to believe that his name or trade-mark is one not unlikely to be imitated, so as to constitute a forgery, is entitled to ask that, without the requirement of information beforehand, goods so marked shall be stopped, and to meet this the board have established the following system.

26. They have established a system of registration of name or marks so that a manufacturer, dealer, or trader may register his name or mark at such port or ports as he desires. In respect of names or marks so registered, it will be the duty of the officers, at the particular port or ports, to prevent the delivery of goods to which such names or marks or imitations of them as above explained may be applied, unless the delivery is authorized by the registered proprietor.

27. When goods are thus detained on account of names or marks which have been registered in this department, care is to be taken in every case that, in addition to the usual notice of seizure required under section 207 of the customs consolidation act, information of the detention, and of the cause of such detention, shall be at once given in writing to the person who has so registered his name or mark, or to the representative appointed by him to authorize delivery of the goods, who is to be informed that unless immediate attention is given to the matter the goods will be released. If, at the end of forty-eight hours, the collector (or other principal officer concerned) does not receive a reply he will release the goods; but collectors will observe that the limit to the time of detention here laid down does not apply

in cases where the marks are such as to render the goods liable to detention irrespective of the question of registration. In any case of detention under this system of registration the board, if they see fit, may order security to be given if prolongation of the detention is requested and the matter is, at all, one of doubt.

28. Any manufacturer, dealer, or trader, whether British or foreign, may register his name or mark; but officers may refuse registration to any name or mark which they consider to be of a character too indefinite or indistinct to recognize, referring to the board in any case of doubt. An applicant for registration must prove his proprietorship of the name or mark by declaration (see p. 15); and if, in order to avoid delay, he desires to do so, he may appoint an agent to give authority for delivery of his goods.

29. It must, however, be distinctly understood that the use by any manufacturer, dealer, or trader in the United Kingdom of even his own name on foreign goods, and the use by any manufacturer, dealer, or trader on like goods, of words, figures, or marks of any kind stating or indicating, directly or indirectly, make or production in the United Kingdom, are prohibited unless such goods are properly qualified by the required definite indication of origin. It must, therefore, be clearly explained to every person registering a name or mark which involves any such statement or indication, as will probably often be the case, that, while the name or mark will be guarded by such registration, it will not be rendered admissible unless duly qualified, as the law may require, in every case.

30. Goods bearing a mark registered in this department may be delivered by the officers without reference to the board on receipt by them of the authority of the proprietor of the mark, or of his duly appointed agent, provided the mark be properly qualified, as in this order shown.

GENERAL.

British returned goods.

31. British goods returned bearing the name, brand, or mark of any British manufacturer may be admitted upon proof of their origin being furnished. This may be done by bill of store, or by a declaration by the importer that the goods are, to his knowledge, British goods returned, and were originally manufactured in this country; or by and with the consent in writing of the proprietor of such name, brand, or mark, or his legal representative (42 and 43 Vict., c. 21, s. 6).

32. The declaration by the importer as to the British origin of the goods may be in the usual form as an ordinary customs document, but if the officer sees reason to doubt it, he should refer the papers to the board; and he should in no case require a statutory declaration under the act as to such declarations without the board's order.

33. On any other point British goods returned will not be dealt with except on information.

Goods for private use.

34. *Dutiable.*—Tobacco, including cigars, not exceeding 20 pounds, wine not exceeding 12 gallons, and spirits not exceeding one-half that quantity, in any one consignment, may be admitted free of the act, on the officer being satisfied that the goods are for private use.

35. *Nondutiable.*—Such goods sent as presents, or for personal use, and not in any process of sale or purchase, are similarly free of the act, and this especially includes articles not new, and which are manifestly private property, such as clothing, or other personal effects, and old, used, and damaged articles sent for repairs, imported by, or consigned to, persons whose names are on them. This applies also to presents to corporate bodies or public institutions.

Goods in transit.

36. Under the transshipment regulations, transshipment and transit goods are not to be specially examined for the purpose of scrutinizing marks in the absence of information (general order 45, 1898); nor are such goods to be detained under the merchandise marks act unless they infringe its provisions in one or other of the following ways:

(a) By reason of their bearing marks which raise a clear and direct claim to British origin; or

(b) By reason of their bearing the name or trade-mark of a manufacturer, dealer, or trader in the United Kingdom, without qualification; or

(c) By reason of their bearing a trade-mark specially registered at the customs.

When the mark on a package, or on goods found therein, contravene the merchandise marks act, all the packages of the same mark on the entry are to be examined, the packages with other marks being treated as if on a separate entry.

This direction also applies to goods entered for home consumption, but intended to be forthwith reshipped for exportation, on production of satisfactory evidence (such as bills of lading, invoices, etc.) of the final destination abroad of the goods; but they are subject to examination under general order 41, 1898, as laid down in general order 41, 1899, paragraph (8).

Marks not descriptive, but part of the goods.

37. Wording or marking, whatever may be its character, if it is not a description "applied" to goods, but part of the goods themselves, as, for instance, the regulating words on a thermometer, the titles of books, Christian names on handkerchiefs, such words as "a present from Margate" on china, and the like, are amenable to the act.

Goods imported for advertising purposes only, and not for sale, although bearing the name or name and address of a British trader, provided he is not a maker of, or dealer in, such articles, may be delivered upon a written statement to that effect from the person whose name is on the goods.

Reports of detention.

38. Report is to be made immediately of all cases of detention of goods, stating briefly the number of packages detained, the port from which they come, the marks and numbers of the packages, the description and value of the goods, and the objectionable marking, whether by means of labels or on the goods themselves, on account of which they are detained. Reference should be made to any previous cases of the importation of illegally marked goods consigned to the same merchants or coming from the same consignor.

A monthly return is to continue to be made to the board, being forwarded to the solicitor.

A quarterly return is to be made to the board (Division IV), for which purposes the present form of record at the various stations is to be maintained.

39. Immediate reports of detentions of goods may be dispensed with when such detentions are made in consequence of the absence of evidence that the marks on the goods are correct, provided that the officers have reason to believe that such evidence will be forthcoming within a reasonable time. On production of the evidence, the officers, if satisfied therewith, will deliver the goods. This direction will include British returned goods, bearing marks which would be open to objection on goods of foreign origin; also goods bearing marks indicative of origin in some country other than that from which the goods are imported, when such marks are believed to be authentic.

40. The whole of the marks found on the detained goods should be reported, including the marks on cartons, cases, etc., containing the goods, and not merely the actual mark for which the detention has been made.

Qualifying words to be conspicuous, etc.

41. The officers are to take care that, in all cases where the board allow qualifying words to be added before the delivery of goods, such words are applied in characters clear, conspicuous, and as indelible as the marks requiring qualification and in close proximity to those marks.

Seizures and unclaimed goods.

42. In all cases in which goods are ordered to be retained as seizures, a full examination of the contents of all the packages should be made as soon as the order for seizure is given, and any discrepancy between the marks originally reported and those found on the goods should be communicated to the board forthwith.

But if an importer should express a wish not to have all his packages opened, officers may forego this upon a consent in writing from him, or his agents, that the whole consignment shall be taken as having marks applied to them similar to those on the goods in the packages already opened.

43. Goods which have been placed under detention on account of illegal marks, and in respect of which no applications have been made by the importers for, or no steps taken to carry out the conditions imposed by the board on their release, are to be removed to the Queen's warehouse, within two months from the date of the board's order for which their detention, without special directions in each case, if the officers see no circumstances which call for exceptional treatment. They are to be entered in the monthly seizure account.

Patent or copyright on goods.

44. In order that there may be no risk of goods protected by patent or copyright in the United Kingdom being offered for sale by this department, in submitting accounts of seizures under the act particular attention should be called to any goods included for disposal marked "Patent," or "Copyright," or which the officers have any reason to suppose are patented, or the subject of copyright, in this country.

Watch cases and watches.

45. A special provision as to watch cases and watches is made by section 7 of the act. It provides that, as regards watches, any mark on the case is to be deemed to extend to the watch. If, therefore, a watch case is made in this country, with any statement or indication of origin, such as, for instance, a British hall-mark, and, having been exported, is returned with a foreign movement, then, in the absence of a counter description on the watch itself, the mark on the case will apply to the watch.

General order 9, 1888, which goes fully into this subject, is not affected by this consolidating order.

PROCEDURE ON INFORMATION.

46. It must be borne in mind that information, in itself, even though given, is not a mandate to the Crown to detain; and no detention should on account of it be made where it is clear that the law would be against it. Officers may sometimes see at once that a consignment to which the information points does not infringe the law, and they will then not detain the goods. But they are authorized to make, when necessary, a fuller examination than ordinarily takes place.

47. In any other case the officer will detain the goods and require (if it is not already given) immediate security, as in regulation 4. The sufficiency of the sureties named in the notice of information must be tested in the usual way. Regulation 7 shows when the security will be delivered up.

Whenever security is not duly given there will be no further detention.

48. Information will not generally touch the point of origin. Whenever it does so and affects the interests of "British possessions" or "foreign states," if the name complained of is found to be applied to the goods and is the name of a country, or of a place in a country, not the country of the port of shipment, the officer may, in the absence of proof of make or produce at the place or in the country named on them, be satisfied that the alleged infringement clearly exists. This is in accordance with the principle in paragraph 22.

49. Wherever an information relates to a forged trade-mark alleged to be one recognized in a British possession or foreign state, information will not be good unless it relates to a possession or state to which section 103 of the patents, designs, and trade-marks act, 1883, has been applied by orders in council, viz:

British possessions.—New Zealand, Queensland, Tasmania, and Western Australia.

Foreign states in Europe.—Belgium, Denmark (including Faroe Islands), France, Greece, Italy, the Netherlands, Norway, Portugal (including Azores and Madeira), Roumania, Servia, Spain, Sweden, and Switzerland.

In North and South America and the West Indies.—Brazil, Ecuador, Mexico, Paraguay, San Domingo, Surinam and Curaçao, the United States of America, and Uruguay.

In Africa.—Tunis.

In Asia.—Japan and Netherlands East India colonies.

Definitions.

50. The officers will note the meanings given by the act to the following expressions, viz:

"Goods," "trade-mark," "trade description," "false trade description," "person," "manufacturer," "dealer" or "trader," "proprietor," "name," "name or initials"—section 3, and *54 Vict., c. 15, s. 1.

"Applied," "falsely applied," "coverings"—section 5, (1), (2), and (3).

51. The following general orders are hereby canceled:

Nos. 81 and 99 of 1887; Nos. 10, 14, 26, 33, 39, 44, 121, 122, 125, and 147 of 1888; No. 7 of 1889; Nos. 1 and 8 of 1890; Nos. 50 and 68 of 1893; No. 4 of 1894; Nos. 4, 28, 34, and 82 of 1895; Nos. 4 and 9 of 1896; No. 63 of 1897.

The following circular letters are also canceled:

Nos. 1, 4, 5, 8, 33, and 36 of 1889; No. 6 of 1890; Nos. 9 and 20 of 1891; No. 13 of 1892.

The following London port orders are also canceled:

Nos. 9, 18, 21, 61, 70, 72, 74, and 76 of 1888; Nos. 23, 48, and 52 of 1889; Nos. 2 and 6 of 1890; Nos. 12 and 58 of 1893; No. 19 of 1894; No. 13 of 1895; No. 4 of 1898.

The following general orders on the subject are not affected, viz: 9, 1888; 36, 1888 (with directions as to examining, London port order No. 73, 1888); and 43, 1891.

By order of the board.

JOHN COURROUX.

CUSTOM-HOUSE, LONDON, *February 26, 1900.*

REGULATIONS MADE BY THE COMMISSIONERS OF CUSTOMS UNDER SECTION 16 OF THE
MERCHANDISE MARKS ACT, 1887.

Whereas by the merchandise marks act, 1887 (hereinafter called "the act")—

After various provisions against the sale, or exposure for sale, or possession for sale, trade, or manufacture of goods with forged trade-marks or false trade descriptions, or trade-marks falsely applied to them; and after defining (among other things), the expression "trade-mark" in manner therein set forth, with reference to "the patents, designs, and trade-marks acts, 1883," and the law of indicated British possessions and foreign states; and after defining the expression "trade description" as any description, statement, or other indication, direct or indirect, as to number, quantity, measure, gauge, or weight of goods, as to place or country in which any goods were made or produced, as to the mode of manufacturing or producing any goods, or as to the material of which any goods are composed, or as to any goods being the subject of any existing patent, privilege, or copyright; and after defining the expressions "false trade description," and "goods," "apply," and "falsely apply;"

It is provided by section 16 that—

(I) All such goods as above mentioned, and (II) all goods of foreign manufacture, bearing any name or trade-mark, being or purporting to be the name or trade-mark of any manufacturer, dealer, or trader, in the United Kingdom, unless such name or mark be accompanied by definite indication of the country in which such goods were made or produced, shall be prohibited to be imported, and, subject to the provisions of the said section, shall be included among goods prohibited to be imported, as if they were specified in section 42 of "the customs consolidation act, 1876."

And whereas by section 18 of the act, after authorizing the continued use of trade descriptions lawfully and generally applied to goods of the particular class, or manufactured by a particular method, to indicate such class or method, it is provided that, where such trade description includes the name of a place or country calculated to mislead as to where the goods were actually made or produced, such goods not having been actually made or produced there, the said reciting section should not apply (and, consequently, goods so marked would be prohibited), unless there be added to the trade description, immediately before or after the name of the place or country, in an equally conspicuous manner with that name, the name of the place or country in which the goods were actually made or produced, with a statement that they were made or produced there.

And whereas it is also provided by the said section 16 that the commissioners of customs (hereinafter called "the commissioners") may, from time to time, make, revoke, and vary regulations, either general or special, respecting the detention and forfeiture of goods the importation of which is prohibited as hereinbefore mentioned, and the conditions, if any, to be fulfilled before such detention and forfeiture, and may by such regulations determine the information, notices, and security to be given, and the evidence requisite for any of the purposes of the said section, and the mode of verification of such evidence.

And it is further provided by the said last-mentioned section that before detaining goods or taking proceeding with a view to the forfeiture thereof under the law relating to the customs, the commissioners may require that such regulations as aforesaid shall be complied with, and satisfy themselves as to the liability of the goods to forfeiture; that such regulations may apply to all goods, the importation of which is prohibited by the said section, or different regulations may be made respecting different classes of such goods; and also that the regulations may provide for the informant reimbursing the commissioners all expenses and damages

incurred in respect of any detention made on his information, and of any proceedings consequent on such detention; and it is also provided by the said section that section 2 of the revenue act, 1883, shall be repealed from a day to be fixed by regulations under the said reciting section, such day not being later than the 1st day of January, 1888, without prejudice to anything done or suffered thereunder.

And whereas section 2 of the revenue act, 1883, is the law under, and by virtue of which, goods of foreign manufacture infringing the proprietary rights of British subjects in names, addresses, and trade-marks, or bearing or having upon them, under certain conditions, the name of a place in or a part of the United Kingdom, are, at the present time, detected and stopped by officers of customs acting on their own observation and responsibility, under directions laid down by the commissioners, and without the requirement of previous information, security, or other conditions.

Now, therefore, the commissioners, under and by virtue of the hereinbefore recited power in that behalf, hereby make and require to be complied with the following regulations, viz:

1. Goods prohibited to be imported as hereinbefore recited, having applied to them forged trade-marks, false trade descriptions, or marks, names, or descriptions otherwise illegal, which, upon examination are detected by the officers of customs, are to be detained by them without the requirement of previous information.

2. In giving information with a view to detention an informant must fulfill the following conditions, viz:

(i) He must give to the collector or superintendent, or the chief officer of customs of the port (or subport) of expected importation, notice in writing stating (a) the number of packages expected, as far as he is able to state the same; (b) the description of the goods by marks or other particulars sufficient for their identification; (c) the name or other sufficient indication of the importing ship; (d) the manner in which the goods infringe the act; (e) the expected day of the arrival of the ship.

(ii) He must deposit with the collector or other officer as aforesaid a sum sufficient, in the opinion of that officer, to cover any additional expense which may be incurred in the examination required by reason of his notice.

3. If, upon arrival and examination of the goods, the officer of customs is satisfied that there is no ground for their detention, they will be delivered. If he is not so satisfied, he will decide either to detain the goods, as in a case of detention upon ordinary examination, or to require security from the informant for reimbursing the commissioners or their officers all expenses and damages incurred in respect of the detention made on his information and of any proceedings consequent thereon.

4. The security thus required must be an immediate ad valorem deposit of £10 per cent on the value of the goods, as fixed by the officer from the quantities or value shown by the entry; and, also, subsequently a bond to be completed within four days in double the value of the goods, with two approved sureties. The ad valorem deposit will be returned upon completion of the bond, and will not be required if, as an alternative where time permits, the informant prefers to give a like bond before examination upon estimated value of the goods declared to by him under statutory declaration. If the security is not duly given as above required there will be no further detention of the goods.

5. In the above regulations the words "officer of customs" mean an officer acting under general or special direction of the commissioners, and the words "value of the goods" mean value irrespective of duty.

6. The "notice" and "bond" required as above shall be in the forms contained in the schedule to these regulations, or in such other forms as the commissioners may from time to time order and direct.

7. The security taken under these regulations will be given up at the times following, that is to say:

Where given before examination, and if no detention, forthwith.

Where given on detention:

If the forfeiture is completed, either by lapse of time or ultimate condemnation by a court of justice, then on such completion of forfeiture.

If the forfeiture is not completed, then—

If the goods are released by the commissioners and no action or suit has been commenced against them or any of their officers in respect of the detention, then at the expiration of three months from the time of detention; or, if the goods are released for failure of proceedings taken for the forfeiture and condemnation thereof upon information under section 207 of "the customs consolidation act, 1876," and no action or suit has been commenced against the commissioners or any of their officers in respect of the detention, then at the expiration of three months from the trial of such information.

If within such periods as aforesaid any such action or suit as aforesaid has been commenced, then upon the ultimate conclusion of such action or suit and the fulfillment of the purpose for which the security was given.

8. These regulations apply to transshipment and transit goods as well as to goods landed to be warehoused or for home consumption.

9. The 1st day of January, 1888, is by these "regulations" fixed as the day from which section 2 of the "revenue act, 1883," shall be repealed, subject to the terms of the recited act; and these regulations will take effect from the date of such appeal.

CHARLES DU CANE,

H. MURRAY,

HORACE SEYMOUR,

Commissioners of H. M. Customs.

CUSTOM-HOUSE, LONDON, *December 1, 1887.*

SCHEDULE, BOND, AND DECLARATION.

SCHEDULE.

(Merchandise Marks Act, 1887.)

To the collector, superintendent, or

chief officer of customs at the port (or subport) of ———:

I hereby give you notice that the undermentioned goods, that is to say [describe the goods, number of packages, marks used, and any other particulars necessary for their identification], are about to be imported into your port on or about the — day of — next in the [describe the ship and give name or indication], from —; that such goods are liable to detention and forfeiture, being [state how the goods infringe the act, and if the infringement is one as to a forged trade-mark protected in a British possession or foreign state, state the possession or state, or, if the infringement is one as to place or country of origin, state the name of the place or country falsely used]; that — Mr. —, of —, and Mr. —, of —, are prepared to become my sureties in such bond as may be required upon detention of the goods.

And I request that the said goods may be detained and dealt with accordingly.

Dated this — day of —, 189—.

A. B. (or agent for).

NOTE.—Mr. — refers to —, his bankers (or) solicitors, and Mr. — to —, his bankers (or) solicitors, as to his sufficiency for the penalty of the bond.

BOND.

(Merchandise Marks Act, 1887.)

Know all men by these presents, that we, A. B., ————, and ————, are held and firmly bound unto our Sovereign Lady Victoria, by the grace of God of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, in the sum of ———— pounds, to be paid to our said Lady the Queen, her heirs or successors. For which payment well and truly to be made we bind ourselves, jointly and severally, our heirs, executors, and administrators, firmly by these presents. Sealed with our seals.

Dated this ——— day of ———, in the year of our Lord, one thousand eight hundred and ———.

Whereas the above-named A. B. has by a notice dated the ——— day of ——— informed the collector of customs at ——— that the undermentioned goods, that is to say ———, were about to be imported into the port of ———, contrary to section 16 of the merchandise marks act, 1887, and requested that the said goods should be detained and dealt with accordingly.

And whereas the said goods duly arrived in the said port on the ——— day of ——— last, and are now detained pursuant to the said notice.

Now, the condition of this obligation is such that if the said A. B., his executors or administrators, shall well and effectually indemnify, save harmless, and keep indemnified Her Majesty, her heirs and successors, and all her and their officers of customs and their executors or administrators, from and against all loss or damage, payment or payments, and all costs and expenses which Her said Majesty, her heirs or successors, and her and their officers of customs, their executors or administrators, shall or may sustain or incur by reason or on account of any detention of the said goods following upon the information contained in such notice and any proceedings consequent upon such detention, then this obligation shall be void, or otherwise shall be and remain in full force and virtue.

Signed, sealed, and delivered.

DECLARATION ON REGISTRATION.

(Merchandise Marks Act, 1887.)

Port of ———.

I, [full name and address of declarant], hereby declare that ["I" or "I and my partners, trading as Messrs. ————," or "such and such a company, of which I am the representative official," or "so and so of such and such a place abroad, whom I represent in this country"] ["is" or "are"] the proprietor, of ["the following name as a trade description," or "the following trade-mark," or "the following name as a trade description and trade-mark"], viz, ————, which ["I" or "we"] expect to be applied to goods imported, from time to time, at this port; and that ["I" or "we"] have appointed Mr. ———— [this portion as to appointment of agent may be erased where such appointment is not desired], of ———, to be ["my" or "our"] agent to give authority for the delivery of such goods.

I make this solemn declaration conscientiously believing the same to be true, and by virtue of the statutory declaration act, 1835. (Signed.) ————.

Declared this ——— day of ———, 188—, at ———— before me.

A Commissioner to Administer Oaths, etc.

N. B.—Registration in pursuance of this declaration is subject to the provisions of the act which forbid the importation, by a registered proprietor, even of his own goods which bear, in name or mark, any statement or indication, direct or indirect, of make or produce in the United Kingdom unless qualified as the act requires.

GERMAN SPARKLING WINES.

(From United States Consul-General Guenther, Frankfort, Germany.)

The law imposing a revenue tax on sparkling wines, which was passed in the spring of 1902, went into effect on July 1, 1902. The stock on hand at that time was subject to this tax. The latest volume of the statistics of the German Empire for 1903 contains the figures for the nine months ended March 31, 1903. During this period 103 establishments manufactured sparkling wine from fruit (wherein neither grapes nor grape wines were used) and 203 manufactured champagne, *i. e.*, sparkling grape wine. The total production of sparkling wine for the nine months was 7,680,023 large bottles, of which 151,378 were sparkling fruit wines.

With the exception of the tax on stock on hand July 1, 1902, tax was paid on 129,909 bottles of the product without grape wine and on 5,949,275 large bottles of champagne; of the former only 3,023 were exported under bond, and of the latter 795,509 bottles. The total imports during the same period were 798,474 bottles.

The stock on hand of sparkling wines from fruit was 37,295 bottles on July 1, 1902, and 52,133 bottles on March 31, 1903, while that of champagnes was 1,151,302 and 1,875,563 bottles, respectively.

The net income to the Government as a result of the tax for the nine months was 5,186,860 marks (\$1,234,491), of which sum 2,260,942 marks (\$538,104) was on account of stock on hand July 1, 1902.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *October 3, 1903.* *Consul-General.*

GERMAN OPINION OF AMERICAN STATISTICAL WORK.

The Central Bureau for the Preparation of Commercial Treaties, at Berlin, has just published a bulletin in which it urges the establishment of a bureau for obtaining and giving information on commercial and economical conditions in foreign countries. The bureau calls attention to the movement lately inaugurated in Great Britain in which trade journals devote themselves to obtaining and publishing exhaustive information on existing trade conditions in certain countries. Thus English manufacturing and exporting circles have received valuable directing aid in extending their business relations with South Africa. The bureau's bulletin deplores the lack of such special information for German exporting interests, and it proposes

to make strenuous efforts to partly supply this want by translating and publishing English export reports on South Africa. In editing these reports it will take for its model the monographic reports published by the Bureau of Statistics of the United States, which the bulletin says are exemplary, unequaled, and of great service to American merchants and manufacturers. Other trade bodies in Germany hold the same view. Last week I received an inquiry from the German Export Review, the leading journal of German export trade, as to how they could procure copies of these "monographic reports."

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *August 26, 1903.*

BRITISH, GERMAN, AND AMERICAN CONSULAR REPORTS.

In its issue of September 17, 1903, Commercial Intelligence, a London journal devoted to the interests of British trade at home and abroad, has an article relating to the methods employed by England, Germany, and the United States in publishing the reports of the consuls of the respective countries. It says:

The American system of publishing consular reports daily is undoubtedly a good one, and compares very favorably with our own system of issuing a formal blue book once a year from each consular district. Nor is this the only advantage that American traders get from their consular system as compared with their British confrères. The American Bureau is not at all particular as to where its information is obtained so long as it is good and reliable and likely to be useful; indeed, it is no uncommon thing for the Bureau to publish articles from foreign newspapers.

It is another point in favor of the American consular system that their reports are distributed gratis to American citizens who care to apply for them, while the British reports must be paid for in advance. In Germany, of course, precautions are taken that the really valuable portions of consular reports do not go into any but German traders' hands. This is managed by cutting out the vital parts of the reports and sending them separately to the chambers of commerce, which, again, have official recognition. These are "some things they manage better abroad."

COMMERCE AND INDUSTRIES OF GERMANY.

(From United States Consul-General Mason, Berlin, Germany.)

RECOVERY FROM DEPRESSION OF 1900.

During the year ended June 30, 1903, German industries and commerce have continued to recover slowly but normally and surely from the collapse and depression which overtook them during the summer of 1900. In nearly every branch of production dividends, although in many cases derived more or less from artificially stimulated exports, have continued to improve, and the panicky apprehensions of two years ago have been replaced by a secure confidence

that the worst is over and that the conclusion of the new commercial treaties is alone requisite to restore Germany to a secure and lasting period of prosperity.

If this expectation is clouded by any really ominous symptoms, it is the persistence with which certain leading industries continue to go on increasing their productive capacity, regardless of the fact that the limit of domestic absorption has long been passed, and any augmented output of most manufactured or partly manufactured products can only be disposed of by increased exports, which are now pushed, as many economists think, to the extreme verge of safety. In the Ruhr district alone 34 new coal-mine shafts were begun in 1902, a number of large iron and steel works were completed in the Lorraine-Luxembourg quarter, and throughout the Empire building operations—more or less in excess of the actual demand—have continued to absorb vast amounts of capital which could not be otherwise profitably employed.

FOREIGN TRADE OF GERMANY.

The total foreign commerce of Germany during the six years 1897–1902 was as follows:

Year.	Imports.	Exports.	Total trade.
1897.....	\$1,150,228,058	\$906,335,178	\$2,056,563,236
1898.....	1,303,680,224	952,415,548	2,256,095,772
1899.....	1,376,503,464	1,039,681,342	2,416,184,806
1900.....	1,438,234,000	1,131,214,000	2,569,448,000
1901.....	1,420,150,046	1,132,738,866	2,552,888,912
1902.....	1,381,780,400	1,145,446,400	2,527,226,800

There was, therefore, in 1902 a decline of \$38,369,646 in imports and an increase of \$12,707,534 in exports, leaving a net decrease of \$25,662,112 in the foreign commerce of this country, as compared with 1901. In respect to quantity, the imports of 1902 were 1,255,900 tons less and the exports 2,718,000 tons more than those of 1901.

IMPORTS AND EXPORTS BY ARTICLES.

The following statement shows in the order of their respective importance the total imports and exports under the twenty-one groups which formed the bulk of Germany's foreign trade in 1902:

Imports.

Principal articles.	Value.		Per cent of total.
	<i>Marks.</i>		
Cotton, raw.....	319,700,000	\$76,088,600	5.5
Wool	273,900,000	65,188,200	4.7
Wheat.....	271,600,000	64,640,800	4.7
Coffee	143,200,000	34,081,600	2.5
Barley.....	127,900,000	30,440,200	2.2
Silk, raw.....	117,700,000	28,012,600	2.2
Eggs and yolks of.....	115,100,000	27,393,800	2
Lard and fats.....	109,700,000	26,108,600	1.9
Rye	104,800,000	24,942,400	1.8
Corn.....	93,400,000	22,229,200	1.6
Horses	92,400,000	21,991,200	1.6
Lumber and wood.....	92,400,000	21,991,200	1.6
Cattle hides.....	92,000,000	21,896,000	1.6
Tobacco, raw.....	91,300,000	21,729,400	1.6
Coal.....	89,900,000	21,396,200	1.5
Woolen yarn.....	86,600,000	20,611,800	1.5
Copper	84,700,000	20,158,600	1.5
Chile saltpeter.....	81,700,000	19,444,600	1.4
Gold bullion.....	72,600,000	17,278,800	1.3
Petroleum.....	71,700,000	17,064,600	1.2
Furs and feathers.....	69,000,000	16,422,000	1.2
All other imports.....	3,204,500,000	761,671,000	57.1
Total.....	5,805,800,000	1,381,780,400	.....

Exports.

Principal articles.	Value.		Per cent of total.
	<i>Marks.</i>		
Woolen goods.....	266,900,000	\$63,522,200	5.5
Cotton goods.....	259,200,000	61,689,600	5.4
Coal.....	208,900,000	49,718,200	4.3
Machinery	197,400,000	46,981,200	4.1
Iron, manufactures of.....	162,200,000	38,603,600	3.4
Sugar	159,400,000	37,937,200	3.3
Silk goods.	146,200,000	34,795,600	3
Clothing of all kinds.....	120,800,000	28,750,400	2.5
Colored engravings, etc.....	102,100,000	24,299,800	2.1
Coal-tar colors.....	89,300,000	21,253,400	1.9
Books, maps, and music.....	85,600,000	20,372,800	1.8
Fine ironware.....	80,400,000	19,135,200	1.7
Leather	69,800,000	16,612,400	1.4
Gold and silver ware.....	68,800,000	16,374,400	1.4
Woolen yarn.....	62,500,000	14,875,000	1.3
Gold bullion.....	59,600,000	14,184,800	1.2
Toys.....	55,400,000	13,185,200	1.1
Furs and feathers.....	49,900,000	11,876,200	1
Iron blooms, bars, etc.....	49,600,000	11,804,800	1
Porcelain.....	47,800,000	11,376,400	1
Gold coin.....	46,400,000	11,043,200	1
Coke	45,800,000	10,900,400	1
Cattle hides.....	42,800,000	10,186,400	.9
All other exports.....	2,336,000,000	555,968,000	49.7
Total.....	4,812,800,000	1,145,446,400	.....

IMPORTS AND EXPORTS BY COUNTRIES.

The United States again heads the list of countries which furnish the merchandise imported by Germany, with a grand total for 1902 of 911,100,000 marks (\$216,841,800), or 15.7 per cent of the total importations of the year, as against \$248,009,800, or 18.2 per cent of the total imports of 1901.

In respect to destination of German exports in 1902 the United States stands third, with a total of 449,200,000 marks (\$106,909,600), or 9.3 per cent of the total, whereas Austria-Hungary took 11.1 per cent and Great Britain 20.1 per cent. The whole table of imports and exports, with the countries of origin and destination and the percentage which each contributed to the entire movement for the year 1902, presents the following interesting exhibit:

<i>Imports.</i>					
Whence imported.	Value.	Per cent.	Whence imported.	Value.	Per cent.
United States.....	\$216,841,800	15.7	British South Africa.....	\$6,235,000	0.5
Russia and Finland.....	184,116,800	13.3	Norway	5,545,400	.4
Austria-Hungary.....	171,241,000	12.4	Free port Hamburg.....	5,307,400	.4
Great Britain.....	145,322,800	10.5	Japan	4,236,400	.3
France and Algiers.....	86,965,200	5.4	Portugal	3,379,600	.3
British Indies.....	56,739,200	4.1	Cuba and Porto Rico.....	3,474,800	.3
Netherlands.....	49,051,800	3.5	Uruguay	3,070,200	.2
Argentine Republic.....	48,028,400	3.5	Servia	2,975,000	.2
Belgium.....	46,814,600	3.4	Mexico	2,927,400	.2
Italy	45,815,000	3.3	Greece	2,645,600	.2
Switzerland	40,150,600	2.9	Venezuela.....	2,451,400	.2
Australasia.....	28,607,600	2.1	British North America.....	2,237,200	.2
Brazil.....	28,226,800	2	Ecuador.....	1,951,600	.1
Chile.....	26,894,000	1.9	Peru.....	1,665,000	.1
Dutch Indies.....	21,634,200	1.6	Bulgaria	1,618,400	.1
Roumania	20,039,600	1.5	British West Indies.....	1,570,800	.1
Sweden	19,159,000	1.4	British West Africa.....	10,234,000	.7
Spain.....	17,826,200	1.3	Portuguese West Africa...	1,832,600	.1
Denmark.....	17,778,600	1.3	Kongo State.....	1,713,600	.1
China	13,232,800	1	Dominican Republic.....	142,800	.1
Egypt.....	10,852,800	.8	All other countries.....	14,094,000	1.1
Turkey	8,710,800	.6			
Guatemala	5,688,200	.4			
Costa Rica and Honduras..	2,165,800	.2			
			Total.....	1,381,780,400	100

Exports.

Whither exported.	Value.	Per cent.	Whither exported.	Value.	Per cent.
Great Britain.....	\$229,789,000	20.1	Mexico	\$8,115,800	0.7
Austria-Hungary.....	126,877,800	11.1	British South Africa.....	7,877,800	.7
United States.....	106,909,600	9.3	Chile	7,689,400	.7
Russia and Finland.....	88,559,800	7.7	Dutch East Indies.....	5,593,000	.5
Switzerland	67,901,400	5.9	Portugal	4,855,200	.4
Belgium.....	62,046,600	5.4	Egypt	4,331,600	.4
France and Algeria.....	60,523,400	5.3	Cuba and Porto Rico.....	2,951,200	.3
Denmark.....	31,201,800	2.7	Uruguay	2,808,400	.2
Italy	30,940,000	2.7	German West Africa.....	2,522,800	.2
Sweden	28,464,800	2.5	Peru	2,165,800	.2
British East Indies.....	16,707,600	1.5	Greece	1,642,200	.1
Hamburg	14,589,400	1.3	Philippine Islands.....	1,547,000	.1
Norway	14,589,400	1.3	Central America.....	1,547,000	.1
Spain.....	13,280,400	1.2	Bulgaria	1,428,000	.1
Japan	11,852,400	1	Servia	1,322,800	.1
Roumania	11,781,000	1	Transvaal	1,213,800	.1
China	11,566,800	1	Bremerhaven.....	2,213,400	.2
Argentine Republic.....	11,233,600	1	British West Africa.....	1,927,800	.2
Australia	10,829,000	1	Portuguese West Africa...	1,071,000	.1
Brazil	10,424,400	.9	All other countries.....	9,424,800	.8
Turkey	10,305,400	.9			
British North America.....	9,210,600	.8	Total.....	1,145,446,400	100

There is thus shown by the official German statistics a net balance of \$109,932,200 in favor of the United States in the reciprocal trade of the two countries during the calendar year 1902, as compared with a balance of \$156,189,800 in our favor in 1901. It is to be again remembered that the foregoing total of imports from the United States include some American goods landed in the free ports of Hamburg and Bremen, but which are in fact destined for Russia, Scandinavia, and Austria-Hungary.

As a key to the fundamental economy of Germany as an industrial nation, nothing could be more expressive than the following division of the imports and exports of the past three years into four primary groups, viz, raw materials, manufactured products, food materials, and precious metals. The exhibit is made in aggregate values as follows:

Groups of articles.	Imports.		Exports.	
	1900.	1902.	1900.	1902.
Raw materials.....	\$667,137,800	\$609,184,800	\$264,560,800	\$276,603,600
Manufactures	285,528,600	262,466,400	709,858,800	735,182,000
Food products.....	419,546,400	468,526,800	123,188,800	101,530,800
Precious metals	66,021,200	41,602,400	33,605,600	32,130,000
Total	1,438,234,000	1,381,780,400	1,131,214,000	1,145,446,400

GERMAN FOREIGN TRADE IN 1903.

The official statistics now accessible show that the whole bulk of imports into Germany during the first six months of 1903 was 21,723,915 metric tons, valued at 3,068,308,000 marks (\$730,257,304), an increase of 2,062,606 tons in bulk and 229,089,000 marks (\$54,523,182) over the importations during the same six months in 1902 and 316,321,000 marks (\$75,284,398) over those for the corresponding period in 1901.

Exports during the first half of 1903 amounted to 18,303,199 tons, valued at 2,410,354,000 marks (\$573,664,252), an increase of 2,514,068 tons and 186,895,000 marks (\$44,481,010) over those of the same period in 1902 and 3,254,930 tons and 274,334,000 marks (\$65,291,492) in excess of the exports during the corresponding period of 1901. The record of 1903 shows, therefore, a definite and notable revival in Germany's foreign trade. It is also noticeable that the increase, both in imports and exports, is not confined to a few special kinds or groups of merchandise, but extends about equally to nearly every item in the whole schedule. There is, for instance, a strong advance in the importations of cotton and cotton yarns, ores and minerals, wool, copper, and all the leading raw materials of German manufactures. Grains and all other food products, hides, and cattle show a substantial increase.

TRADE OF GERMANY WITH THE UNITED STATES.

In this marked development of Germany's foreign trade the United States has played an important and constantly augmenting part. Although, as has been already shown in this report, German exports to Great Britain still more than double in value those sent to the United States, the purchases of German goods by our country are increasing year by year.

EXPORTS TO THE UNITED STATES.

A glance at the total values of exports declared for the United States at the several American consular offices in Germany during the fiscal year ended June 30, 1903, as compared with the record of the five years preceding, shows the following striking comparison:

1898.....	\$74, 228, 487
1899.....	83, 999, 177
1900.....	98, 812, 159
1901.....	99, 887, 013
1902.....	101, 714, 064
1903.....	120, 828, 805

The last fiscal year broke all records and fixed the high-water mark of exports from Germany to the United States. This movement, which includes to a very large extent manufactured or par-

tially manufactured products in which the element of labor forms a large percentage of the cost of production, is still in progress and the values of declared exports during the third quarter (July–September) of 1903 from the consular district of Berlin have reached the sum of \$2,991,010, an increase of \$558,814.42 over the exports for the same quarter of the preceding year.

IMPORTS FROM THE UNITED STATES.

The imports from the United States during the first six months of the past three years, respectively, show the following fluctuations in the fifteen groups which form the important bulk of American exports to Germany:

Article.	First 6 months of-		
	1901.	1902.	1903.
	<i>Met. tons.</i>	<i>Met. tons.</i>	<i>Met. tons.</i>
Raw cotton.....	142,802	105,054	162,077
Cotton waste.....	5,724	6,005	8,153
Wheat.....	389,040	566,980	301,614
Rye	15,079	20,172	23,670
Oats.....	44,478	2,090	503
Corn.....	571,104	43,095	309,310
Raw tobacco and stems.....	5,800	6,307	5,377
Hides and skins.....	2,149	1,412	3,152
Lumber, timber, and staves.....	107,109	108,164	144,101
Meats of all kinds.....	7,086	9,085	5,700
Petroleum and products.....	374,128	429,425	387,600
Pig iron.....	9,300	300	.....
Cotton-seed oil.....	10,918	7,705	6,286
Copper	23,135	35,780	31,843
Electrical machinery	232	102	21
Agricultural machinery.....	15,087	9,072	7,732
Machine tools.....	800	209	400
Fresh fruits.....	542	213	3,093
Dried and preserved fruits.....	9,936	9,599	22,724
Shoes.....	37	37	52

The notable features in this exhibit are the facts that while imports of raw materials and food products generally speaking hold their own or, as in the case of dried and preserved fruits, are rapidly increasing, the imports of manufactured merchandise, with the exception of machine tools and shoes, are steadily declining. The present spurt in imports of American machine tools is due to the returning activity in the manufacture of electrical and other machinery. Germany learned years ago that the best machine tools came from the United States. Her foremost machine shops are largely supplied with them, and every lathe, planer, and milling or other machine that comes to this country still further equips German machinists to meet all present and future competition.

The steadily increasing import of American shoes has been fully

described in previous reports; it is an interesting and promising traffic, but as yet only 10 per cent of the shoe imports of Germany are of American origin. Significant and natural also is the decline in the receipts of American agricultural machinery. It is not because improved farming implements and machines are used less in Germany than heretofore—the fact is exactly the reverse—but the 590 native manufacturers of agricultural implements and machinery include many firms of large resources and tireless enterprise who are very clever in adapting in their products the valuable features of foreign-made machines, and notably those from the United States. The homemade article resembles closely in appearance the American original; the wooden parts are largely of white ash imported from the United States. They are handsomely finished, generally well made, and in most cases somewhat cheaper than the imported article. In the more complicated harvesting machinery, certain features of which are covered by patents, the leading American makers who came into the European field early and have worked up a large trade with great skill and energy still hold the first place, but it is not probable that the imports of American farming apparatus will ever again reach the proportions which they attained four or five years ago.

GRAIN IMPORTS INTO GERMANY.

Finally, as a key to the grain movement of this year, the following condensed statement showing the total imports to Germany of the different cereals during the first six months of 1903 and of the two preceding years will be of interest. The imports (in metric tons of 2,204 pounds avoirdupois) were as follows:

Description.	1903.	1902.	1901.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Wheat.....	826,773	938,984	800,658
Rye	429,800	378,532	373,170
Oats.....	237,949	114,420	205,896
Barley.....	608,946	411,029	360,460
Maize	428,663	470,445	686,687
Malt.....	53,671	50,243	47,878
Beans	14,959	10,302	10,566
Pease.....	32,912	21,105	31,096
Linseed.....	156,178	111,968	123,280

FRANK H. MASON,
Consul-General.

BERLIN, GERMANY, September 30, 1903.

SIGNS OF RETURNING PROSPERITY IN GERMANY.

(From United States Consul-General Mason, Berlin, Germany.)

The record of September confirms the general impression of returning industrial activity in Germany. A very sensitive and trustworthy barometer of the existing situation is found in the daily records of the labor market, which are under competent official management at Berlin. From these records it appears that during the past month there were received for every 100 open situations only 111 applications, as compared with 137 applications in September, 1902. The relation between supply and demand for men's labor declined from 166 applications for every 100 vacancies in September, 1902, to 128 in the same month this year. The noticeable decrease of unemployed men on the streets and at the employment bureaus in Berlin is the result of the greatly increased activity in the building trades; in Berlin, Magdeburg, Altona, Solingen, and at several other points the demand for that class of labor has exceeded the local supply. There is also an increased activity in the mining and metal industries of the Rhenish-Westphalian district, where several of the leading iron and steel companies are said to have booked orders that will keep their works in operation until beyond the close of the year. The expected relapse in the textile industries which was predicted for the end of the past summer has not occurred as yet; and although many manufacturers in different lines are selling their products at home and for export at prices which are disproportionately low in relation to the cost of labor and materials, yet on the whole the volume of business is steady and large and traffic in the great German seaports is active and promising. For the first time since the summer of 1900 there is a daily and serious shortage of freight cars on the State railways, and station agents throughout the country are required to employ night shifts of freight handlers when necessary to unload all freight immediately after arrival and to return the empty cars, if not urgently needed where they have been unloaded, to the headquarters of the district to which they belong.

BERLIN, GERMANY, *October 10, 1903.*

FRANK H. MASON,
Consul-General.

PRESENT INDUSTRIAL AND COMMERCIAL CONDITIONS IN GERMANY.

(From United States Consul-General Mason, Berlin, Germany.)

The more salient points of the present situation are that labor is on the whole better employed than it was a year ago; the textile factories are busy, but manufacturers complain of low prices for their products, and the same is true of electrical machinery, the cement manufacture, and several branches of iron and steel production in which the productive capacity of the country has expanded out of all due relation to its ability to pay for and consume the output. The close of the war in South Africa—which had hit German exports very heavily—did not bring the revival of business that was generally expected, and the cessation of the American demand for iron and steel has created a feeling of apprehension that the tide has turned and that the United States will in future no longer be a buyer but a formidable seller of metals in markets which are of primary importance to German trade.

Notwithstanding a cold, wet summer, which entailed more or less serious inundations in Posen and Silesia, the harvests are on the whole fairly favorable, so that the full average quantity of grain, potatoes, and other food material will be produced at home. Traffic on the State railways has increased so that the gross receipts from passenger and freight during the first six months of the year exceeded by 6 per cent those of the same period in 1902.

The one unknown quantity which affects directly the return of confidence and full prosperity to most kinds of business is the uncertainty which overhangs the consummation of the new treaties of commerce with the nine or ten nations which divide the bulk of Germany's foreign trade and, consequently, the date at which the new tariff of December 25, 1902, will go into effect. Work has been in progress on several of these treaties during the past spring and summer, but as to what exact stage of readiness they have reached very little is known. The impression prevails that the Russian and Austrian treaties, two of the most important and difficult of all, are much farther advanced than has been officially announced. However this may be, the treaties, when negotiated, will come for confirmation before the new Reichstag, which was elected in June of this year and which is supposed to differ somewhat radically on certain economic questions from the one which enacted the impending tariff. What effect, if any, this may have on the new schedule after it has served its purpose as a basis for the new commercial treaties

is one of the elements of uncertainty in the present situation concerning which men's opinions and hopes are generally shaped and governed by their interests.

Construction in the merchant marine slackened somewhat in 1902, so that the 946 vessels of 1,000 tons and more register were increased by only 41 steamers, while the total number of sailing vessels diminished by 11, leaving a net gain of 30 vessels of the larger class and a total gain of 250,000 tons in aggregate burden in 1903. This and the increase of crews in the merchant marine of Germany from 50,500 to 56,300 men during the year shows how rapidly the average size and capacity of seagoing vessels are increasing in this country.

FRANK H. MASON,
BERLIN, GERMANY, *September 30, 1903.* *Consul-General.*

TRADE CONDITIONS IN GERMANY.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

The annual reports of German chambers of commerce for the year 1902 have just been issued. These bodies have a semiofficial character, inasmuch as they are obliged to report to the Government upon the conditions of trade, traffic, manufacture, and other economic matters affecting their districts and Germany in general. In addition these chambers are frequently called upon by the Government and the courts of justice for opinions on commercial usages; on subjects for legislation, or concerning treaties intended to be made with foreign nations; on the utility of opening new lines of communication and the granting of subventions for the same; on questions concerning labor, colonization, tariffs, etc.

As only the most prominent men engaged in commerce, manufacture, finance, and economics are selected to serve as officers and members of these German chambers of commerce, the opinions and reports emanating therefrom exert a powerful influence and have the weight of expert testimony.

I give herewith extracts taken from a number of the published reports of the chambers of commerce of the chief industrial and trade centers of the German Empire, covering the operations and business of the year 1902:

CONTINUED DEPRESSION.

The year 1902 brought little improvement to the economic conditions of Germany, which during the preceding year had been very unsatisfactory. The hopes that had been entertained of a change for the better have not been realized. Although production has been reduced and exports increased, supply and demand

have not reached a satisfactory status. The enhancement of exports was mainly favored by conditions existing in some foreign countries—chiefly the United States—which took large quantities of goods, although at prices affording little profit to the German producers.

The effect of the depression is shown by the decrease in the number of industrial joint-stock companies organized in Germany during the year as compared with previous years:

Year.	Companies.	Total capital.	
	<i>Number.</i>	<i>Marks.</i>	
1899.....	364	544,000,000	\$129,472,000
1900.....	261	340,000,000	80,920,000
1901.....	158	158,000,000	37,604,000
1902.....	87	118,000,000	28,984,000

HOPE IN NEW COMMERCIAL TREATIES.

In view of the approaching expiration of many commercial treaties industrial circles are now occupied with the question whether the Government will be able to obtain more favorable terms for exports by the new treaties.

DECREASE IN WAGES.

In consequence of the existing depression the condition of labor in 1902 was even worse than in 1901, in many cases causing wage reductions. The autumn of 1902 brought a change for the better.

AMERICAN PETROLEUM.

American petroleum is but little affected by the competition from the Russian product, as the latter is not popular and can only be sold at a considerable reduction from the price obtained for the American article.

CHOCOLATE AND SUGAR.

A prominent chocolate factory in the Cologne district intends to open branch factories in such foreign countries as make exportation thereto difficult by tariff legislation. Sugar producers look with anxiety on business prospects for the year 1903 on account of the abrogation of the premiums hitherto received on exported sugar and the reduction of the protective rate of 20 marks (\$4.76) to 4.80 marks (\$1.14) per 100 kilograms (220.46 pounds), the result of the Brussels convention.

BICYCLES AND AUTOS.

The value of the exports of German bicycles increased in 1902, but the level of prices was low and manufacturers reported very small profits from their operations. The manufacture of automobiles is growing; these vehicles are becoming very popular for all purposes.

AUTOMATIC MACHINES.

The use of automatic slot machines has greatly increased, especially for the distribution of candies, pictorial postal cards, the sale of railway tickets, for the operation of musical apparatus, telephonic communication, kinematographs, etc.

ELECTRIC INDUSTRIES.

The depressed condition of the electric industries in 1901 became more acute during 1902. The expected combine of all the leading works of this industry has not been effected and prices are unprofitable in consequence of sharp competition.

AMERICAN FRUIT.

The Cologne report, from which most of the foregoing matter is taken, contains a long discussion of the police order forbidding the sale of American sulphurized fruits, and criticises many provisions of the order very severely, claiming that these fruits are perfectly wholesome and that there is, therefore, no justification for seizing the stocks in the hands of wholesale and retail dealers, whereby the business is seriously injured.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *September 30, 1903.*

GERMAN INDUSTRIAL NOTES.

(From United States Consul Warner, Leipzig, Germany.)

A prosperous industry.—The Schlesische Aktien Gesellschaft für Bergbau und Zinkhüttenbetrieb, which is located in Lipine, a place of over 16,000 inhabitants, in upper Silesia, Kingdom of Prussia, is building new zinc works, and work is progressing so rapidly it is expected that half of the ovens will be ready to fire up some time this fall. This company is one of the largest of its kind in Germany; it was organized on the 28th of September, 1853, with a capital of 15,000,000 marks (\$3,570,000), but in 1856 the capital was increased to 23,529,000 marks (\$5,599,902). In honor of its fiftieth anniversary, which occurs on the 28th of this month, it will distribute 92,000 marks (\$21,896) among those of its employees who have been with it for a number of years. This company has paid 98 per cent in dividends during the last five years.

Reduction in textile production in Germany.—It is reported from the textile center of München-Gladbach, in the Rhine Province, that some of the weaving mills of that place have been compelled to reduce their production. The reason thereof is because of the scarcity of the special kinds of yarn called "imitatgarn." For the past five weeks there has been a "lockout" in the Crimmitschau district, and, as the manufacturers there have no large stock of yarns on hand, their shipments of such have practically ceased. Some factories at München-Gladbach, which principally manufacture trouserings, table covers, woolen petticoats, etc., have had to shut down a number of their looms because their stock of imitatgarn has become exhausted.

Cellulose in Germany.—The Silesian Cellulose and Paper Factory at Egelsdorf, near Friedeberg, Silesia, which was destroyed by fire

on the night of August 27, 1903, is to be rebuilt, so it is reported. This factory, although small, was doing a good business, as are most of those manufacturing cellulose in this country. During the year 1901 the imports of cellulose and similar articles into Germany amounted to 32,070 metric tons, valued at \$1,551,760, and in 1902 to 21,938 metric tons, valued at \$966,994. The exports in 1901 were 55,285 metric tons, valued at \$3,026,408, and in 1902 75,454 metric tons, valued at \$3,681,384. Sweden, Austria, and Norway are the principal countries from which such articles are imported into Germany, and France, Belgium, England, the United States, the Netherlands, and Italy the principal countries to which German cellulose is exported. Formerly large quantities went to Russia, but the exports to that country are growing less each year. For example, 10,393 metric tons of German cellulose were exported to Russia in 1899 and only 2,076 metric tons in 1902.

New electric railway.—The Westhofen-Hohen-Syburg branch of the Hörder District Electric Street Railways was opened to traffic on the 19th of September, 1903. In the spring of 1899 the Allgemeine Lokal- und Strassenbahn Gesellschaft in Berlin (General Suburban and Street Railway Company of Berlin) began, under a fifty years' concession, the construction of a network of street railways in the Hörder district of the Province of Westphalia. With the completion of the above-mentioned line it now has 41.02 kilometers (25.49 miles) of tracks, connecting many important industrial towns in the Province. The company, which was organized in 1881, owns, controls, and operates street railways in different cities throughout Germany. It has a paid-up capital of 15,000,000 marks (\$3,570,000) and a bonded indebtedness of 19,000,000 marks (\$4,522,000.)

Projected improvements of harbor of Hamburg.—The senate of the free port of Hamburg has asked the Bürgerschaft (house of burghesses) to approve an appropriation of 8,301,500 marks (\$1,975,757) recommended for making certain improvements upon the river and harbor. It is expected that the house will vote that this amount be expended. In Germany commercial harbors and seaports are a matter for the State governments in which they are located to look after. This is perhaps not exactly the case in any other country formed by the union of a number of separate states.

New State railroad.—A movement is now on foot to build a railroad from Taubenbach, in the Duchy of Saxe-Meiningen, on the Probstzella-Wallendorf branch of the Prussian State railroads, to Eisfeld, in the same State, on the main line of the Prussian State railroads running between Eisenach and Lichtenfels. The road as proposed would run through Ernstthal, Lauscha, Igelshieb (the highest place in the Thuringian forest), Neuhaus, Steinheid, Limbach, etc.,

and would have a length of from 25 to 30 miles. The local authorities of the towns above mentioned, as well as the State governments of Saxe-Meiningen and Schwartzburg-Rudolstadt, are much interested in the proposed road, which would be built by the Prussian State Government.

New agricultural school.—The Prussian Government has decided to found an agricultural school at Delitzsch, in the province of Saxony, near the Saxon frontier. Delitzsch has a population of 10,500. It is on the line of the railroad extending from Leipzig to Magdeburg, which belongs to the Prussian State Government, in the heart of a most prosperous section of the country, where agriculture is the chief occupation of the people.

Why German exporters succeed.—Attention is frequently called to the fact that to be successful in the modern struggle for commercial supremacy manufacturers must conform to the requirements of the local trade and the conditions existing in a market if they are to do business. When they disregard such advice they run the risk of having their wares supplanted by those of their competitors. An example of this kind is reported from Hongkong, China. Formerly, it is said in German papers, large quantities of French hosiery and textile goods were sent thither, but the importation of those articles is decreasing from year to year and English and German goods would seem to be wresting the Hongkong market from the French manufacturers simply because they comply with the requirements of the local trade.

Installing electric power for mining purposes.—The royal Prussian mining office at Rüdersdorf, in the Nieder-Barnim district, Province of Brandenburg, has decided to equip the potash mines of that section with electric power. A central plant will be erected to furnish the mines with power for pumping, hauling, and loading, work upon which will be begun at once by two Berlin electric companies. It is expected to have the same completed and in running order by next spring.

Consolidation of steamboat companies.—The Deutsch-Oesterreiche Dampfschiffahrts Aktiengesellschaft, of Dresden, and the firm of Baumeier & Harling, of Hamburg, have just effected a consolidation under the name of the former. This company will have its principal offices in Hamburg, the northern terminus of its traffic, which is carried on on the Elbe and Moldau rivers, between Hamburg and Melnik. It has in all a fleet of about 40 boats and employs over 200 hands.

Municipal light ownership.—At the last meeting of the common council of the city of Sonneberg, Duchy of Saxe-Meiningen, a city of 13,151 inhabitants, it was decided to buy the gas works of the

Sonneberg Gas Company. To accomplish this it will be necessary to raise 600,000 marks (\$142,800), which it is proposed to do by a bond issue.

The common council of Zeitz, a city of 28,000 inhabitants, in the Province of Saxony, Kingdom of Prussia, has just decided to erect a municipal electric light and power plant.

Arnstadt, a city of 14,585 inhabitants, in the principality of Schwarzburg-Sondershausen, has purchased the Rudolph Levy electric plant and proposes to operate the same in conjunction with the city's gas and water works. To do this, however, it will be necessary to make a new bond issue of 240,900 marks (\$57,120).

Many German municipalities already own their gas and water works and electric light and power plants.

BRAINARD H. WARNER, Jr.,
LEIPZIG, GERMANY, *October 6, 1903.* *Consul.*

ORGANIZATION OF THE GERMAN EXPORT TRADE.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

The Deutsche Export Revue, the leading representative of the German exporting industries, in a late issue devotes considerable space to the subject of the organization of German exporters and the development of the Empire's export trade.

After enumerating various measures to be instituted by the Government, such as the building of inland water ways to cheapen transportation, allowing rebates or drawbacks of custom duties on raw materials imported when reexported in the form of manufactured articles, etc., the editorial concludes with the statement that these governmental aids will be but small factors in fostering and expanding the export trade. Much more important, says the writer, is a thorough organization of the methods—*i. e.*, the ways and means of securing foreign markets for Germany's industrial products. The editorial calls upon all Germans interested in exportation—manufacturers, merchants, travelers, etc., residing abroad—to offer suggestions based on their practical experience. The closing passage of the editorial reads as follows:

To-day the eye of the commercial world is hypnotically fixed upon the United States and on everything that is done there. The successes attending that nation are not the result wholly of its technical ability, but are due rather to its business methods—in the main, to the methods practiced in its export trade. These methods

are constantly discussed in public and the subject viewed and illumined from all points with the object of improving and extending the export trade. Our German manufacturers can not do better than follow the American methods.

While it is undoubtedly true that German exporters have much to learn from the methods of American exporters, it is equally true that American exporters can learn much to their advantage by studying the manner in which the Germans cater to foreign trade.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 5, 1903.*

COMMERCIAL CRISIS IN GERMANY.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

In the reports of the various German chambers of commerce for 1902 a general admission is made that, contrary to expectations, the industries of the Empire have not recovered from the effects of the great depression which prevailed in 1901, and that the general economic condition would have been much worse in 1902 had it not been for the increase in the export trade, which found its very best customer in the United States.

On this subject the report of the Mannheim Chamber of Commerce has the following:

While but two years ago great danger existed of Germany becoming inundated by American manufactures—especially of iron and steel—the United States has been the chief customer of German manufacturers during the past year. Thanks to that support, business has been fairly good. The year 1902 is marked by a frightful number of commercial smash-ups, and may be termed a year of reconstruction.

Many of the reports of these chambers of commerce express their anxiety as to the future, when the United States will change from its position of a big customer to that of a sharp and able competitor of Germany and all Europe. The fear exists that the strong manufacturing combines in the United States, owing to their superior organization and working methods, their heavy capital, and the advantage they have in the rich natural resources of their country, will be able to undersell European manufacturers in the foreign and even in their own (European) markets.

The maintenance of Germany's export trade and of her manufacturing interests depends largely upon the satisfactory conclusion of negotiations of new commercial treaties with foreign nations.

The reports express great anxiety concerning the successful conclusion of the treaties and fear that the new German tariff law, with its greatly increased rates on imports, will act as a heavy handicap in the negotiations.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 3, 1903.*

BOOK TRADE IN GERMANY.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

The book trade in Germany has acquired a peculiar and complicated character, which is the result of long years of gradual development. The trade shows a tendency toward decentralization. In England and France the book trade has become more or less centered in London and Paris, but in Germany the university towns and capitals of the different States have succeeded in keeping a grip upon the trade, which has contributed much toward maintaining the intellectual ascendancy of such cities as Leipzig, Berlin, Stuttgart, and Munich.

The official statistics for 1903, published in *Offiziel Adressbuch des Deutschen Buchhandels*, place the number of book publishers in Germany at 2,000, exclusive of those who issue works on art and music. There are also about the same number of retail dealers and printing establishments which publish certain books as a side line to their regular business. The publisher may be looked upon as the actual originator of the book trade, inasmuch as he buys the manuscript from the author, undertakes to have it printed, and then places it before the public. The business relations between a publisher and an author are always regulated by a definite contract. It often occurs that a publisher imparts to an author his ideas regarding certain works which he desires to have written, and it is this class of books which are usually placed upon the market on the subscription plan. The number of new subjects which find their way into print amount to about 25,000 per annum. In 1898 there were 158 commission book agents in Leipzig, 42 in Berlin, and 15 in Stuttgart, who waited upon 9,500 retail book dealers. In Germany every man who is connected with the book trade must have a commission agent in one of the three above-named cities, whom he must publicly acknowledge as his representative. The following table shows the number of book publishers and retail dealers in Germany:

Year.	Publishers and dealers.	Employees.
	<i>Number.</i>	<i>Number.</i>
1875	3,220	10,590
1882	4,426	14,481
1895	8,425	24,692
1903 (estimated).....	10,000	30,000

During the six years from 1896 to 1901, the number of failures in the book trade in Germany, according to the figures published in *Der Deutsche Buchhandel und die Wissenschaft* (von Karl Bücher), 1903, was as follows:

Year.	Failures.	Year.	Failures.
	<i>Number.</i>		<i>Number.</i>
1896	32	1899.....	46
1897	49	1900.....	61
1898	58	1901.....	89

The book industry in Germany at present, like many other branches of manufacture and trade, is suffering from overproduction. The vast majority of the 25,000 new books catalogued during 1902 proved to be a drug on the market. This state of affairs naturally makes its influence felt in the bookstores all over the country. Another hardship which the retail dealers are laboring under at present is the difficulty in securing able assistants as clerks and bookkeepers. The number of young men who find their way into the bookshops as apprentices is becoming less every year. If their training has been such as to give them a good literary knowledge of the book trade in general, they prefer to find employment in the publishing houses, where they enjoy shorter hours and better wages. A ruinous rival of the retail book dealer in Germany is the department store, which has been established in all the large cities of the Empire. These large establishments use books as advertising matter, and often sell them at a price below that actually paid to the commission agent. In small towns many bookbinders sell books of every description as a side line, which increases the difficulties of the retail dealer. The opinion prevails in well-informed circles that the retail bookstore in Germany, exclusively as such, has seen its best days.

ERNEST L. HARRIS,
Commercial Agent.

EIBENSTOCK, GERMANY, *September 16, 1903.*

CANALS OF ALSACE-LORRAINE.

(From United States Consul Liefeld, Freiburg, Germany.)

Alsace-Lorraine has a great network of canals, of which the most important are: (1) The Rhine-Marne, extending from Marne River, in France, past the city of Nancy, France, to Strassburg, Alsace; (2) the Saar canal system, from the River Saar, at Saargemuend, in the northern part of Lorraine, southward, joining with the Rhine-Marne Canal; and (3) the Rhine-Rhone system, connecting the Rhine with the Rhone in France, and extending in Alsace from Strassburg to Mulhausen, thence westward toward Belfort, France.

One of the chief articles transported on these canals is coal, brought from Belgium and from the Saar and Ruhr districts of Germany. In the winter season the formation of ice interferes somewhat with this traffic, the closed season averaging from fifty to sixty days. Other articles transported in great quantities are limestone, sandstone, lime, chalk, sand, and porcelain earth, grain, fertilizers, petroleum, naphthalene, chemicals, iron ores, grindstones, etc.

The total traffic on these canals and the Mosel River during 1900 and 1901, and the classification, is shown in the following table:

Classification.	1900.		1901.		Decrease in 1901.
	Tons.	Per cent.	Tons.	Per cent.	Tons.
Importation.....	561,365	31.7	496,640	29.9	64,725
Transportation	422,291	23.9	398,650	24	23,641
Inner traffic.....	561,929	31.8	552,356	33.2	9,573
Exportation.....	222,860	12.6	214,382	12.9	8,478
Total	1,768,445	100	1,662,028	100	106,417

The general average distance of all the commodities transported on the Alsace-Lorraine system of canals during 1901 was 66.37 milés; during 1900, 65.47 miles.

E. THEOPHILUS LIEFELD,

FREIBURG, GERMANY, *September 14, 1903.*

Consul.

GERMAN HATBAND INDUSTRY IN 1902-3.

(From United States Consul Langer, Solingen, Germany.)

HATBANDS FOR MEN'S HATS.

The hope of German hatband manufacturers that trade with England would revive at the close of the Boer war was vain. Orders were scarce and no large contracts were closed.

The trade with the United States was satisfactory in the spring and fall, but was light during the summer and at the end of the year.

The cost of raw silk was from 15 to 20 per cent higher and that of cotton 10 per cent, but no higher prices for hatbands could be obtained, owing chiefly, it is claimed, to a lack of unity among the manufacturers. Some claim that no profits were realized during the year.

Formerly Germany manufactured large quantities of hair-felt hats, for which a good grade of hatband was used. Of late years, however, Austria and Italy have made these hats, as well as the hatbands, and it is feared that the export to Austria of silk and half-silk hatbands will cease entirely unless a lower rate of duty can be agreed upon with Austria.

Italy not only supplies its own needs, but is, on account of cheaper labor, a lively competitor of Germany for the trade of England and the United States, which two countries have been the heaviest purchasers from Germany.

Another difficulty seems to be in the fact that only an evenly twined and clean cotton yarn can be used for hatbands, of which the finer numbers (over No. 40) can only be bought in England and on which the duty is very high. All efforts to secure a refund of duty on this yarn, used in hatbands for export, have failed.

HATBANDS FOR LADIES' HATS.

Owing to the strike of the silk dyers in the United States and the demand there for light and wide ribbons, American importing houses placed large orders about the middle of the year, and as there were considerable orders from English and German dealers toward the end of the year all wide-ribbon looms were kept running.

The principal complaints of the manufacturers are that the staple hatbands, which were made for stock, were not disposed of and that the high prices of the raw materials necessary for making wide ribbons left but a narrow margin of profit.

JOSEPH J. LANGER, *Consul*.

SOLINGEN, GERMANY, *September 12, 1903.*

FOREIGN TRADE BY PARCELS POST.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

The increase of 21,100,000 francs (\$4,072,300) in the value of packages sent abroad by parcels post is noteworthy. About four years ago I called the attention of our manufacturers and exporters to the importance of parcels-post facilities with foreign countries and gave a detailed account of the different countries with which Germany had established conventions for sending parcels by mail. I also gave the transportation rates, stipulations as to size and

weight of the packages, etc. I pointed out the great advantages which the export trade of Germany derived from these parcels-shipping facilities. The rates by parcels post are much cheaper than by express companies or private transportation means. The facilities are also greater because the packages can be delivered at the local post-offices. In this way the exporter can state to his customer abroad the exact cost of goods ordered, including delivery at the point of destination.

An enterprising manufacturer can send his traveler abroad and take small orders for his products, guaranteeing speedy delivery and low transportation charges when his country has a parcels-post connection with foreign countries. A large exporting business can thus be developed from small beginnings.

Germany and France have greatly increased their export trade by the facilities afforded through their parcels-post treaties.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *September 19, 1903.*

GERMAN BEET-SUGAR PRODUCTION.

(From United States Consul Albert, Brunswick, Germany.)

For the thirteen months ended August 31, 1903, the German sugar refineries consumed in the manufacture of sugar 12,381,552 tons of raw beets. During the same period in 1901-2 the consumption of raw beets amounted to 17,614,152 tons, showing a decrease of 5,232,599 tons in the year ended August 31, 1903. The amount of sugar produced during the thirteen months ended August 31, 1903, was 1,663,193 tons, as compared with 2,246,237 tons during the thirteen months ended August 31, 1902, a decrease of 583,044 tons. The kind and quantity of sugar produced in the comparative periods were as follows:

Description.	Year ended August 31—	
	1903.	1902.
	<i>Tons.</i>	<i>Tons.</i>
Crystallized sugar.....	583,127	587,774
Granulated sugar.....	15,748	15,220
Sugar candy.....	136,116	145,172
Loaf sugar.....	228,107	213,045
Flat bar and cubical sugar.....	30,983	26,390
Lump and crump sugar.....	350,651	327,818
Refined and powdered sugar.....	52,420	56,833
Farine (moist sugar).....	2,860	2,174
Liquid refined sugar, including sugar goods.....	1,594,560	1,576,896
Sirup.....	6,062	5,984
Other sugar products.....	478,615	563,718

The compilation of these statistics has been made for thirteen months, because, owing to the new regulations for taxing sugar, the business year has been changed from the 1st of August to the 1st of September.

TALBOT J. ALBERT, *Consul*.

BRUNSWICK, GERMANY, *September 22, 1903.*

WINE OUTLOOK IN GERMANY.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

The wine year 1902 in Germany can not be regarded as a good one. The vines had done exceedingly well during the severe winter of 1901-2, but a heavy frost about the 1st of May, which extended generally over the whole German wine-producing area, destroyed what promised to be one of the best harvests since 1893. The following table from the Statistische Jahrbuch für das Deutsche Reich will show the extent of the wine industry of Germany in 1902. According to this authority, no statistics on the wine crop were published for the years 1899, 1900, and 1901.

District.	Area.	Production.	Value.
	<i>Acres.</i>	<i>Gallons.</i>	
Prussia	45,308	11,253,959	\$4,379,200
Bavaria	54,829	11,717,075	3,022,600
Wurttemberg	41,577	4,954,983	1,713,600
Baden	43,717	10,969,118	3,094,000
Alsace-Lorraine.....	76,942	18,665,856	4,760,000
All other.....	6,973	7,839,588	2,118,200
Total.....	269,346	65,400,579	19,087,600

The wine trade in Germany was equally unfavorable during 1902. The commercial and industrial depression throughout the Empire cast its shadow over the whole wine-growing industry and made its influence especially felt in the decreased consumption of the more expensive grades of wine. The summer, generally speaking, was so unfavorable to tourists that those classes of the German people who are in the habit of making short pleasure tours each year preferred to stay at home, thus creating little demand for wine in the middle-class hotels and restaurants over the Empire. The passing of the agrarian tariff law has also created great discontent among the vineyard owners and wine merchants, for the reason that they anticipate unsettled business conditions as a result thereof. Favorable commercial relations with foreign countries are practically indispensable to a healthy development of the wine export trade, for the reason that wine as a rule is a product usually selected as one best suited for repressive measures in time of tariff wars.

According to the *Moniteur Vinicole*, Germany holds the eighth

place in the list of wine-producing nations. It is claimed, however, by wine connoisseurs that German wines, as far as flavor and bouquet are concerned, are surpassed only by those of France. The best year in the history of German wine culture was 1893. The years 1895 and 1897 were also good years, and the wines made in those seasons are now bringing high prices. About 5,000 tons of the best Rhine and Moselle vintage were shipped to the United States in 1900. Since then the exports have remained about the same, although the demand has been for cheaper grades of wine.

Germany produces in Assmannshausen and Ober-Ingelheim a red wine which is at present receiving much attention on the part of the Government. In all military and civil institutions controlled by the State the officials in authority have been instructed to use their influence in recommending the use of German red wines in preference to those imported. This policy, on the whole, is condemned by wine merchants, for the reason that it has a tendency to undermine the trade of many large establishments which deal entirely in French, Austrian, and Italian wines.

The results of inquiries which I have made of different wine dealers would lead to the belief that the low prices and the general depression surrounding the wine trade have about reached their limit. If the wine crop of 1903 should prove to be fairly good, the prospects for an improvement in the market will become brighter. The weather thus far, however, has been discouraging. A late spring, with continued frosts, was followed by a cold, unfavorable summer, so that the quality of the wine promises to be no better than that for 1902.

ERNEST L. HARRIS,
Commercial Agent.

EIBENSTOCK, GERMANY, *September 26, 1903.*

TOY INDUSTRY OF GERMANY.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

The manufacture of toys in Germany is an industry which gives employment to fully 50,000 people. The total value of the annual exports amounts to \$13,196,386. The prosperity of this industry, like a great many other important lines of manufacture in the German Empire, is dependent upon the importation of certain raw materials from abroad. The raw materials, generally speaking, which are indispensable to the manufacture of toys are as follows:

Lead.	White hollow glass.	Cast iron.
Colored glass.	Wood, various kinds.	Hair lace.
Rubber.	Aluminium.	Copper.
Nickel.	Leather.	Paper.
Porcelain.	Zinc.	Tin.

Many of these are produced in Germany, while others are imported in part or entirely from foreign countries. The wood grown in the forests of Bavaria, Thuringia, and the Erzgebirge is especially suitable to the industry, and this one product has had more to do with its development and stability than any of the others.

The manufacture of toys in Germany has become centered chiefly in the cities of Nuremberg and Sonneberg, while many domestic lines of manufacture which are mainly associated with the industry have sprung up in the surrounding country hamlets. These two cities have become famed for the quantity of their products, and the important place which they hold in the commerce of the world to-day is due chiefly to the fact that they supply fully 80 per cent of all the toys exported from the Empire. The following table, from the *Statistische Jahrbuch für das Deutsche Reich*, shows the amount of the exports in 1902:

Country.	Quantity.	Value.
	<i>Tons.</i>	
Belgium	1,145	\$300,832
France.....	1,471	779,212
Great Britain.....	12,495	4,938,262
Holland.....	1,370	466,718
Austria-Hungary	735	359,618
Russia	258	206,346
Switzerland.....	680	276,556
Argentina.....	357	162,078
Canada	446	172,074
United States.....	9,974	3,707,802
Australia.....	1,052	363,426
All other countries.....	3,012	1,463,462
Total	32,995	13,196,386

The manufacture of toys has become important as a domestic or house industry among the people in the little principality of Meiningen, and the small villages in the country about Sonneberg contain many skilled wood carvers and cabinetmakers. In the village of Hämmerntoy ships, large and small, are carved by persons who have never seen a sea or navigable river. Judenbach and Neuenbau furnish pictures, mirror frames, and fancy boxes. Eisfeld has two factories which make hobbyhorses. Schalkau and Ehnes produce wooden guns of every size and variety; while in Mengersgereuth, Schichtshöhn, Fichtach, and Effeldere such playthings as rattles, wagons, trumpets, whistles, and toy animals are manufactured in large quantities. The making of doll clothing is confined chiefly to Sonneberg and is almost entirely the work of women and girls. Carnival masks are prepared in Heinersdorf, while animals and fowls are fitted up with furs and feathers in the little village of Neufang.

These country villages are clustered about Sonneberg and form one of the chief supports to the more highly developed industries in that city.

The Sonneberg toy industry consists in the main of papier-maché goods, which are gradually pushing wax dolls out of the market. This is due in part to the difficulty of producing a wax doll which is not fragile in structure and sensitive to touch and climate. Sonneberg produces dolls of almost every imaginable variety. They cost all the way from 10 cents a dozen to \$3 each. There are more than 30,000 people engaged in making toys in Sonneberg and in the villages of the Thuringian forest. Fully 75 per cent of this number work in their own homes. The main difference between the industry of Sonneberg and that of Nuremberg lies in the fact that the former consists principally of the manufacture of hand-made toys, supported by a highly developed house or domestic industry, while the latter manufactures toys with machinery in factories equipped with all modern appliances. The two cities are not direct competitors in the strict sense of the term, for each has its own peculiar specialties, and these afford ample opportunities to observe how manual labor in the one, in which tradition and instinct play an important part, are pitted against the technique, mechanical skill, and trained intelligence of the other. Another marked difference between the two industries is that the products of Nuremberg are principally of metal—tin soldiers, swords, railway trains, fleets, models of machinery, and other toys intended for boys—while Sonneberg uses almost exclusively wood, porcelain, glass, and paper in the production of toys best suited to girls.

In regard to the Nuremberg toy industry the official catalogue for the German exhibits at the Paris Exposition says:

One look at the products of the Nuremberg industry shows at once their characteristic qualities. In no other part of Germany where toys are manufactured has metal—chiefly tinned sheet iron, tin, etc.—such extensive and manifold application as in Nuremberg and her sister town, Fürth. Of the 207 toy establishments of these two towns, 148 manufacture metal toys; 1,602 persons are employed in this branch, while the total number of hands employed in the Nuremberg-Fürth toy factories is about 2,000. This number may appear small when we take into consideration the importance of the industry, but it must be remembered that the "domestic industry," which in other toy-manufacturing districts forms such an important feature, hardly comes into consideration here at all, and that in the manufacture of tin toys by machinery manual labor is to a great extent entirely dispensed with.

In the manufacture of tin toys Nuremberg distinctly holds its own. It is probable that this industry has developed out of the old handicraft of the tinsmith, which in former years was very flourishing in Nuremberg, and which has been forced by the growth and development of the mechanical industry to gradually give up the old-fashioned methods.

In regard to the toy industry in the Erzgebirge this same authority says:

The toy industry of the Erzgebirge is remarkable for the perfection of some of its branches. The vast forests of the country provide the home industry with the necessary raw material. The principal seats of this industry are Obernhau, Seifen, Grünhainichen, and Waldkirchen. Each of these villages produces its specialty. In Seifen, for example, little animals are made by the radial splitting up of wooden rings, turned on the lathe in such a manner that each section represents the outline of an animal, which only requires a few finishing touches from the carver. The clever process of production on a large scale explains the extraordinary cheapness of these goods.

During the past few years the home demand for German toys has been on the increase. The German trade, generally speaking, calls for toys of the cheaper sort, and the department stores which have been established in many of the large cities during the past few years buy large quantities of them for advertising purposes. The future prosperity of this industry will depend very largely upon the ability of German statesmen to secure favorable commercial treaties with foreign countries. In the present commercial treaty negotiations with Switzerland and Russia toys are playing an important part. The negotiations with Switzerland begin on the 9th of October. Eighteen sessions have already been held in St. Petersburg without any agreement being reached.

ERNEST L. HARRIS,
Commercial Agent.

EIBENSTOCK, GERMANY, *September 30, 1903.*

SYNDICATES IN GERMANY.

(From United States Consul-General Mason, Berlin, Germany.)

German exports have, in the opinion of certain economists, been pushed during the past year to the limit of safety. This is merely another way of stating the well-known fact that many of the exported goods are sold by syndicates organized and maintained for that purpose, and at prices that yield no profit and sometimes even entail a loss to the manufacturers. Concisely stated, the market values of most manufactured products in this country are below all normal relation to the cost of materials and the taxation, insurance, labor, and other expenses of manufacture. This is the inevitable result of the fact that every stage of manufacture, from the origin of each kind of material in field, forest, or mine, has its own syndicated organization and management, which stubbornly maintains prices, leaving the final manufacturer of the finished product to fight the battle for a market. The greater the number of stages the materials have to traverse from start to finish the heavier the handicap

which the last manufacturer has to carry. There has been therefore a movement on the part of some of these industries to free themselves from the syndicates which control the earlier processes, but this has been possible only to concerns that have large capital at command and could therefore buy up or otherwise control the sources of their materials. Thus, the syndicated newspapers bought or created pulp factories and paper mills to escape from the extortions of the paper trust, which had in turn been squeezed by the syndicated makers of bleaching powder and other materials. Rolling mills and steel works in like manner have bought and built blast furnaces, coking plants, and even coal mines to escape the syndicates that control every grade of coal, coke, pig, bloom, ingot, bar, rail, structural, plate, or punched metal. As a result of these conditions, the large consolidated concerns which have acquired control of the sources of their materials have derived great advantage from the high prices maintained by the syndicates, whose prices for materials the smaller concerns have been compelled to pay. As an example of this, the consolidated Königs und Laurahütte—which is a typical corporation of the highest class—has just declared a dividend of 11 per cent, while appropriating large sums to improvements and the welfare of its workingmen. In 1895 seven German iron and steel works owned and worked coal mines; in 1902 their number had increased to eighteen and they mined for their own use in that year 11,000,000 tons of coal.

This competition of the large concerns which are independent of the syndicates that govern raw and semifinished materials has become so oppressive to the large majority of manufacturers who are not thus independent that the latter have joined in an appeal to the Government for relief. This has been discussed in the press and by the Prussian Diet, and after a somewhat heated controversy has resulted in the appointment of a commission to make an exhaustive inquiry and report on the whole subject of syndicates and their effects upon the interests of the people. As there are now in active operation in Germany not less than 450 syndicates the work of the commission will be colossal, but it has begun with characteristic German thoroughness to ascertain and report the membership and organization of all the syndicates, the number of their employees, character of their produce, its annual bulk and value, causes which led to their formation, the means by which they have pushed their sales and the comparative prices obtained at home and abroad, causes of the difference between home and foreign prices, the influences exercised upon merchants and dependent industries by the imposed conditions of sale, and, finally, the influence of syndicates in keeping up the cost of raw and semifinished materials required

for the manufacture of syndicated products and upon the wages and welfare of workingmen. The report, when it comes, will be a valuable contribution to the literature of that subject, but whether anything can or will be done by legislation to seriously resist the present tendency toward syndicated management and the payment of export bounties from the proceeds of artificially maintained home prices remains to be seen. That through the influence of syndicates in this country capital invested in certain branches of industry and trade has been less exposed to the risks entailed by crises, that prices in times of declining demand have been more steady and uniform, that employment and wages have been rendered more even and permanent, is generally conceded; but the question is now asked with increasing urgency whether these advantages may not have been purchased at a price which weighs unduly upon the German consumers of domestic merchandise.

FRANK H. MASON,
Consul-General.

BERLIN, GERMANY, *September 30, 1903.*

FOREIGN TRADE OF JAPAN.

The Anglo-Japanese Gazette of September, 1903, published in London, England, says, relative to Japan's foreign trade as shown by statistics for the six months ended June 30, 1903:

While it may have been the case that for some years the exports of British merchandise exceeded those of the United States, the energy and enterprise displayed by American firms and their mode of promoting trade with foreign countries has, however, been successful at length in placing that country's exports to Japan ahead of those of Great Britain, as the following figures of Japan's foreign trade to the end of June, 1903, will show:

Country.	Exports.	Imports.
China	\$14,324,503	\$10,871,591
Hongkong	7,255,265	489,754
Korea	2,333,228	2,962,153
British India.....	1,568,457	19,766,117
Other Asiatic countries.....	3,435,991	10,768,511
Great Britain.....	4,641,419	11,853,721
France.....	6,600,240	1,384,420
Germany.....	1,328,311	6,339,227
Italy	1,758,163	47,434
Russia.....	314,961	43,660
Other European countries.....	476,416	3,798,004
United States.....	16,704,036	12,425,345
Other American countries.....	515,285	101,010
All other countries.....	1,450,749	1,841,680

Continuing, the Gazette makes the following deductions.

Taking the figures of exports from the United States to Japan for last year, as compared with those of 1901, an increase of 13 per cent is shown, while on the other hand Japanese imports from Europe show a falling off. In 1881 the United States furnished 5.72 per cent and last year 17.9 per cent of the total imports, as compared with Great Britain's share of 52.57 per cent in 1881 and 18.53 in 1902.

Japan imports large quantities of machinery of every description—railroad plant, vehicles, labor-saving tools—from the United States. Referring to this subject in a previous issue, we pointed out as a reason for the decline of British exports to Japan that hitherto Great Britain has been too proud of the fact that her goods can not be beaten in value, forgetting that there are more ways than one of securing business, and also that human nature is very easily duped by an appeal to the pocket and appearance. Japan's enterprise and desire to obtain the most efficient and quickest machinery and appliances have drawn down upon her increased competition on the part of manufacturing nations. It was also shown that American machinery firms commenced by selling their goods at any price, reaping the reward in growing quantities and an ultimate sure place in the market.

Total imports of Japan and share of the United States and United Kingdom therein during the years 1881 to 1903.

[Compiled by the Bureau of Statistics from official reports of the Japanese Government.]

Calendar year.	Total.	From United States.		From United Kingdom.	
		Value.	Per cent.	Value.	Per cent.
	<i>Yen.*</i>	<i>Yen.*</i>		<i>Yen.*</i>	
1881	31,128,125	1,781,108	5.72	16,364,740	52.57
1882	29,441,453	3,106,758	10.55	13,956,048	47.40
1883	28,431,939	3,187,114	11.21	12,744,943	44.83
1884	29,626,781	2,489,969	8.40	12,758,806	43.07
1885	29,356,967	2,751,320	9.37	12,456,610	42.43
1886	32,168,432	3,358,986	10.44	12,703,248	39.49
1887	44,304,251	3,309,269	7.47	18,970,544	42.82
1888	65,455,234	5,673,843	8.36	28,693,567	43.81
1889	63,995,009	6,173,141	9.65	26,067,934	40.73
1890	80,554,874	6,900,190	8.56	26,619,102	33.04
1891	61,969,183	6,840,947	11.04	19,996,050	32.27
1892	70,076,410	5,988,053	8.54	20,789,332	29.67
1893	87,597,095	6,090,408	6.95	27,929,628	31.88
1894	116,284,050	10,982,558	9.44	42,189,873	36.29
1895	127,260,844	9,276,360	7.29	45,172,110	35.49
1896	169,882,595	16,373,419	9.64	59,251,780	34.88
1897	218,440,623	27,030,537	12.38	65,406,266	29.94
1898	274,599,260	40,001,097	14.57	62,707,572	22.84
1899	219,228,647	38,215,894	17.43	44,836,994	20.45
1900	286,170,933	62,761,196	21.96	71,638,220	25.03
1901	255,816,644	42,769,429	17.5	50,575,788	19.8
1902	271,737,258	48,652,824	17.9	50,364,029	18.5
1903 (6 months).....	166,048,827	24,950,490	15	23,803,654	14.3

* The value of the yen, since 1898, is 49.8 cents.

INDUSTRIAL DEVELOPMENT IN JAPAN.

(From United States Consul-General Bellows, Yokohama, Japan.)

Hemp manufactures.—Among the industries of Japan which are receiving especial attention is the manufacture of hemp. It is reported that orders have recently been executed for a supply of fishing nets for Alaska valued at \$30,000, and that a commissioner has lately been sent to Canada to investigate and report on the prospect of extending the market for nets in that country. There are four hemp-spinning companies in Japan, besides which spinning is carried on as a household industry in the northern provinces, and these sources fully supply the domestic demand for all grades except bleached hemp yarn, which Japanese manufacturers have not the means of producing. The yarn is manufactured in this country into a variety of materials besides nets. Flax is raised freely in Japan, but the importation of flax, hemp, jute, and china grass during the first six months of this year amounted to 5,227 tons, a considerable increase over that of the same period last year, which was 3,250 tons.

Glass.—It is said the art of making glass was introduced into Japan about one hundred and fifty years ago by a Hollander, who settled at Osaka. For several generations the knowledge of the process was confined to a single family, and it was not until about 1879 that the employment of coal instead of charcoal, and the construction of brick chimneys, enabled the manufacturers to introduce improvements which placed the industry on a substantial basis. Osaka has continued to be the center of the industry, and now manufactures for export besides supplying the home demand. The Government has under consideration a scheme for subsidizing a company to train workmen for the manufacture of plate glass. The plan, which it is said will be submitted to the Diet at the next session, calls for 500,000 yen (\$249,000) to be expended during the next four years. It is proposed to choose a factory, which will be under obligation to employ a foreign expert, and construct, under his supervision, two furnaces of the latest style, each with a capacity of at least 470,400 square feet of plate glass a month; also to employ 32 foreigners as trainers of Japanese workmen and train 66 workmen for its own use and 50 for the Government service.

Oil.—The development of the oil industry in Japan has been attended with pronounced success, there having been a rapid increase in the amount and value of the native product. The amount of kerosene used in the country has increased even more rapidly than

has the development of the industry during the past thirty years, and larger importations have steadily accompanied the growing native production until the first six months of this year, during which the importation was only about two-thirds that of the same period in 1902. Whether this falling off marks a turn in the tide or is only a temporary backward movement, which will be followed by a still higher rise, is uncertain, but it is noticeable that the decrease is entirely in American imports (those from Russia, the only other country shipping oil to Japan, having increased), and the change may be due to the operations of the International Oil Company. This is a branch of the Standard Oil Company of America, and has a large refinery at Naoetsu, besides owning some important oil wells in the western provinces. Prior to 1900 there were no less than 40 native oil companies in the country, and during the two years following 28 new companies entered the field, but the smaller Japanese companies were unable to compete with the International, and many of them combined and extended their operations to avoid being crushed out of existence. There are still several small companies and two large ones which may properly be considered as rivals of the International, although neither has more than one-fourth as much capital as the latter. One of the large companies has 83 wells worked by American machinery and 77 worked by native methods. New oil wells have lately been discovered in the northern provinces, and the work of production is being actively pushed. It is reported that the International is working to secure a monopoly of the oil fields in the Hokkaido, where very rich deposits are believed to exist.

Coal.—The coal production of Japan was almost trebled during the years from 1892 to 1901, and the amount exported a little more than doubled in the same time, while the extension of steamship and railway lines and the growing number of factories caused the domestic consumption to be almost quadrupled. It has been necessary to import smokeless coal for the use of the fleet, but a deposit of smokeless coal, underlying about 1,500 acres, has lately been discovered in the Hokkaido, and the discoverer is now applying to the authorities for permission to work the mine.

Miscellaneous.—An Osaka firm of dealers in sugar is preparing for the establishment of a sugar-refining plant, and it is stated that the company, which is backed by foreign capitalists, has already dispatched representatives to England and the United States to purchase machinery.

A company of natives in Yezo proposes to import American machinery for making condensed milk, the island being well adapted to this industry, which is already carried on there.

A native journal welcomes the news that a number of capitalists of Osaka have decided to form an emigration company with a capital of 500,000 yen (\$249,000). The newspaper advises the promoters not to confine themselves to exporting labor, but to purchase suitable tracts of land abroad and employ thereon the workmen they collect. China and Korea are mentioned as offering excellent fields for such exploitation. There are already a number of emigration agencies in the country, but none with so large a capital as this.

E. C. BELLWS, *Consul-General*.

YOKOHAMA, JAPAN, *September 3, 1903.*

RIGHTS OF FOREIGNERS IN JAPAN.

(From United States Consul-General Bellows, Yokohama, Japan.)

A feeling of opposition to foreign capital continues to be manifested among some classes of the population, which interferes to a considerable extent with the free development of industrial enterprises. The better educated Japanese recognize the need of more capital than exists within the country and desire its introduction from abroad, but the narrow views and jealousy of a few often interpose obstacles which cause the withdrawal of intending investors.

The Osaka Gas Company, capitalized principally by New York City financiers, is now reported as having come to an agreement with the city authorities after a year of obstructive negotiations.

The Tokyo Electric Railway Company, half of the capital of which was to be furnished from London, has not yet succeeded in effecting an organization because of opposition from a section of native stockholders reenforced by part of the native press. Investigations made with a view to furnishing capital for railroad enterprises have come to naught because of the law governing security.

As has been stated before in these reports, a foreigner can not own land in Japan, although a number of foreigners may organize themselves into a company, to be known and registered as a "juridical person," and this company has all the property rights of a native citizen. Without the organization of a company as a juridical person, foreigners may lease land and own buildings or trees thereon, and may take mortgages on a private railway, providing the permission of the Government is previously obtained. But in case of foreclosure and sale the mortgagee, if a foreign person or company, would be at the mercy of the railroad company, since he could not bid in the property himself; furthermore, at any time after twenty-five years from the date at which the railroad company obtained official sanction to operate the road, the Government could

buy up the road and announce its intention to succeed to the rights of the mortgagee. In the words of a prominent Japanese lawyer, "Things may be arranged in such a way that the Government may purchase the road at its own price." Under these circumstances the mortgage right does not furnish satisfactory security, and the formation and registration of a juridical person is attended by difficulties and subject to contingencies which make it an undesirable prerequisite to investment. There has been some talk of making changes in the law concerning the right of a foreigner to hold land, but this has not yet been done.

Foreign manufacturing firms operating in this country also report a number of discouraging conditions. In a published interview with Bethell Brothers, a rug-manufacturing firm, the following statement occurs:

We have met with a good many obstacles which we had not expected and which any firm commencing business in another country would not encounter. These obstacles are annoying through being so frequent and so numerous. We could not, it is true, make a "case" of any one of them, but they nevertheless exist in Japan to a degree which would surprise a factory owner in another country.

The "law of incorporation of business men in the principal export commodities" provides that persons engaged in the same business as that for which a guild is formed must become members of the guild, but the Minister for Agriculture and Commerce may make an exemption if he considers the circumstances warrant it. In the case above mentioned Bethell Brothers had not joined the rug weavers' guild and the members of the guild resented that fact. To this was due the petty annoyances referred to.

Those guilds have been formed for many of the most important industries in Japan, their object being to regulate the quality of goods put on the market and secure cooperation for the extension of trade. They are probably the outgrowth of the peculiar conditions which exist here, where there are few or no large manufactories, but a great number of independent, small concerns. Any consignment of goods for shipment is almost certain to include products from a dozen different makers, so that the identity of the producers is lost, and it becomes almost impossible for one manufacturer to build up a reputation which shall become a valuable asset in his business. The incentive to turn out only the best quality is thus much less than in countries where the goods of each manufacturing firm stand solely on their individual merit, and the temptation to send out inferior work is correspondingly increased to the detriment of the commercial interests of the whole country. This defect the guild is intended to remedy, but it has failed to do this, while introducing a number of annoying exactions.

Foreign insurance companies, including 36 fire, 18 marine, 6 life,

and 5 firms conducting both fire and marine insurance, have done a very extensive and profitable business in Japan, but some of the managers of these companies have lately been badly frightened by an order from the Japanese Government, of which the following is a careful translation:

ORDER.

According to the fifth article of the Imperial Ordinance No. 380, thirty-third year of Meiji (1900)—

The —— Life Insurance Company, of ——, is ordered as mentioned in the following articles:

1. The sum of 100,000 yen (\$19,800) should be deposited at the Yokohama branch treasury by the 31st of October of thirty-sixth year of Meiji (1903).

In case the amount of the security fund calculated at the end of the former business fiscal year against the contracts made in Japan exceeds the above-mentioned amount, the sum corresponding to that security fund should be deposited.

2. In case the amount of the security fund calculated at the end of every business fiscal year in future against the contracts made in Japan exceeds the deposited amount, the sum corresponding to the amount in excess should be deposited at the mentioned treasury within four months from the beginning of the next business fiscal year.

3. When the deposit has been made according to the above two articles, the receipt of the deposit should be forwarded each time without delay to this minister.

BARON TOSUKE HIRATA,

Minister of Agriculture and Commerce.

JUNE 26, 1903 (thirty-sixth year of the Meiji).

Some insurance men have understood that, in the case of life-insurance companies, the security fund here mentioned is identical with the reserve against policies, and that compliance with the order would tie up almost the entire working assets of the companies, making it impossible to continue in business in this country; but Mr. Wada, director of the bureau of commerce and industry, in a recent interview stated that they "do not ask such immense amounts to be deposited with the Government," and that he "will designate five kinds of Japanese bonds, bearing 5 per cent interest, any or all of which the companies may deposit as reserve security." It appears from this interview that the Government has not yet decided what per cent of a company's policies will be demanded as a security fund.

E. C. BELLOWS, *Consul-General.*

YOKOHAMA, JAPAN, *September 3, 1903.*

INSURANCE IN JAPAN.

(Translated and compiled in the Bureau of Statistics, Department of Commerce and Labor.)

The following statistics relative to insurance in Japan appear in a report from the German consul-general at Yokohama published in *Nachrichten für Handel und Industrie* of September 9, 1903. They

are based upon a report prepared and issued by the Japanese Minister of Finance:

Description.	Life insurance.		Fire insurance.		Marine insurance.	
	1886.	1900.	1891.	1900.	1886.	1900.
Number of companies.....	1	43	2	20	1	4
Nominal capital.....	\$50,000	\$4,675,000	\$400,000	\$8,000,000	\$500,000	\$4,750,000
Paid-in capital.....	\$50,000	\$1,350,000	\$140,000	\$2,000,000	Not known.	\$1,687,500
Number of policies.....	2,731	803,000	4,800	222,000	8,500	530,000
Amount of insurance.....	\$750,000	\$98,000,000	\$2,500,000	\$163,500,000	\$8,000,000	\$365,000,000

It will be observed that there is a striking difference between the paid-in capital and the amount of insurance assumed. In life insurance the paid-in capital is only 1.4 per cent of the insurance assumed; in fire insurance 1.2 per cent; while in marine insurance it is only one-third of 1 per cent. In 1890 a law was passed regulating Japanese insurance companies as well as those of foreign countries. The latter have to make a deposit as a guaranty of their ability to fulfill their obligations in Japan.

TOBACCO IN JAPAN.

(From United States Consul Warner, Leipzig, Germany.)

The increase in the consumption of tobacco in Japan has been very marked in the last ten years. Cigarettes are being smoked more from year to year, supplanting the old Japanese pipe, which formerly was practically the only way tobacco was consumed.

The tobacco industry became a monopoly of the Japanese Government on August 15, 1899, since which time the cigarette exports have increased very noticeably. In 1898 78,000,000 cigarettes, valued at 133,000 yen (\$66,234), were exported, mostly to Asiatic countries; in 1902 the number rose to 717,000,000, valued at 2,200,000 yen (\$1,095,600). On November 1, 1901, the tobacco monopoly law was so modified as to permit cigarettes and cut tobacco being imported by private parties upon the payment of a 150 per cent ad valorem duty.

Japan first came to be regarded as an important market for American tobacco in the year 1896, and since then the imports thereto have been increasing yearly.

Cigarette machinery has not been introduced into Japan to the same extent as into other countries, but German manufacturers are now making efforts to introduce their machines and are meeting with success.

American cigarette machines are the best in the world and should command the market. American manufacturers should also think of the possibilities Asia offers as a market for their products and not let the same go by default.

BRAINARD H. WARNER, Jr., *Consul.*

LEIPZIG, GERMANY, *October 5, 1903.*

IRON AND STEEL RAILS IN RUSSIA.

(From United States Consul-General Hughes, Coburg, Germany.)

I am informed, on good authority, that a conference has taken place at St. Petersburg between state officials of the various ministerial departments and representatives of mining districts and rail producers, for the purpose of considering the prices paid for rails for the Government railways, and incidentally to discuss the causes of the depression still prevailing in the iron and steel trades throughout Russia. Some time ago the Russian Government consented to pay 1.25 rubles (64 cents) per pood (36.112 pounds) for rails for three years, in the hope of assisting the industry, and as that period has practically expired and the cost of production, based upon the present prices of raw material, is now lower, it was officially hoped to secure a reduction for the delivery of finished rails in the future. It was, however, urged on behalf of the rail makers that the existing rate of 1.25 rubles (64 cents) is moderate, and that it leaves little profit, owing to their being bound by long contracts for pig iron and fuel. No decision, I am informed, was arrived at on the subject of the future price to be paid for rails.

As to the question of the prevailing depression, some of the representatives repeated what has been stated at former conferences, namely, that the principal cause lies in overproduction throughout the country and that it is necessary first of all to remedy this evil. On the other hand, the majority of the ironmasters expressed the opinion that the whole iron and steel industry would be considerably strengthened if the Government would divide the rail orders for the State railways among all the works, instead of, as in the past, placing them with six firms only. This contention, they claimed, was only a reasonable one, seeing that the six favored works, aided by the large Imperial Government orders, have been enabled to dispose of their surplus production in the open market at such low prices as to affect other works prejudicially.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *September 14, 1903.*

Consul-General.

STATE IRON WORKS IN NEW SOUTH WALES.

(From United States Consul Baker, Sydney, New South Wales, Australia.)

The agitation still continues in New South Wales to further the steel and iron industries by giving bonuses to private individuals, and recently a movement was made by the workmen interested in the iron business and a deputation was sent to the premier urging action on the part of the government favorable to the establishment of iron works for the manufacture of rails and bridge iron for the State railways. It was also recommended by this delegation that the State should make the locomotives used on its roads.

The following is a synopsis of a report of the discussion had between the premier and the workmen's representatives:

The chairman of the delegation stated that the establishment of the proposed works would not only result in a saving to the State, but would prove of enormous benefit to the taxpayers and help to swell the consolidated revenue. Boilers have been made in the railway workshops, and have proved to be as good and as cheap, all things considered, as any that could have been imported from the old country. Counting the goods and tank engines and wagons imported into New South Wales from 1901 to 1903, he said that close upon \$1,250,000 had gone out of the State which might have been distributed among the taxpayers; further, it was believed that under a system of local manufacture a better article could have been secured.

Replying to the address, the chief railway commissioner stated that 34 engines for suburban traffic had already been ordered and 20 more orders had been placed for the requirements of the immediate future. He had also stated that no plant in Australia was capable of manufacturing these engines in time for the requirements of the railways; but he stated that during the next five years the railway commissioners would require from 60 to 100 more engines, at a cost of \$25,000 to \$30,000 each, and if the government were willing there would be ample time to have these manufactured in the State. He said it would not be possible to make them in the present government workshops, because all the plant and space was already fully occupied. The railway commissioners estimated the cost of the additional plant required at \$1,250,000, but this seemed a rather high estimate, considering that the Victorian plant only cost \$350,000.

The chairman of the committee pointed out that it was unfair that skilled workmen—the best workmen that could be found in the world—should be idle in Sydney while the work the Government could supply them with was being given to the artisans of Europe and the United States. He said that if the iron trade were good, all other trades would be in a flourishing condition.

The premier said that he had a great deal of sympathy with the request. He quite agreed that the work could be produced in the State and that the preference should be given to local industry. The policy of the State for a number of years past had led to favoring people outside, instead of their own workers; but that was not his policy, and now that they had a federal tariff, he thought the workers would have better opportunities, and certainly more encouragement in the future than they had in the past. A great deal of credit was due to the Federal Parliament for fostering local industry. His own experience with shipping had taught him that

as good work was done in Australia as in any part of the world. He believed that they could make railway locomotives as substantial and as suitable as those made in England or the United States, but it would mean, of course, the setting up of a considerable plant. He said he would consult with the railway commissioners, who were, of course, the controlling power as far as recommendation was concerned in connection with their locomotives and rolling stock, to see whether it was not advisable—and, in his judgment, it would be—to forecast their requirements for the next five years, giving sufficient time for the firms in their midst to erect plants, estimate the cost, and tender to the government for the supply of locomotives; and added that he would be prepared to give a substantial preference to the home-made article in the matter of cost. With their raw material and their natural advantages, he thought they would yet be able to establish enormous industries throughout the State. Referring to general conditions, he said he was seriously of opinion that a great many things imported into the State could be as well, if not better, manufactured locally. It would mean more employment for the people, and, indeed, he had often wondered that in a country so sparsely populated and with such natural resources as New South Wales possessed there should be a single unemployed man. Self-preservation was the first law of nature, and everything that could be done to encourage the employment of the skilled mechanics of the State would be his chief aim. A suggestion had been made that he should urge the imperial authorities to give more of their work in Australia to Australians, and he would be glad to assist in furthering that object. In view of a certain agitation now going on, it was, indeed, possible that larger consideration would be given to the colonies and that this State (New South Wales) would get more of imperial work than had hitherto been the case.

In connection with the foregoing, I have to say that many attempts have been made to utilize the iron ore of Australia, but although millions of money have been spent in erecting works and in operating the plants the attempts have all failed because no one was able to produce pig iron as cheaply as it could be imported. No pig iron is produced at this time anywhere in Australia, and the small rolling mills and furnaces at Lithgow and the various foundries are fed either by imported pig iron or scrap iron gathered from various cities.

Coal deposits seem to be unlimited and of the very best quality, but it remains yet to be demonstrated whether there is iron ore in proximity to the coal in sufficient quantity and of a quality to justify the proposed undertaking.

Reports from northern Queensland say that immense deposits of fine ore, with coal, exist in close proximity, but far away from railway and populous settlements.

O. H. BAKER, *Consul*.

SYDNEY, NEW SOUTH WALES, *September 4, 1903.*

WOOLEN GOODS IN PERSIA.

(From United States Consul-General Hughes, Coburg, Germany.)

German technical journals have lately taken up the question of the exportation of woollen goods to Persia.

Of course, in most parts of Persia cotton goods have the preference, owing to their cheapness and also on account of climatic conditions. Northern Persia, owing to its cooler climate, offers the best market for woollen goods; these goods at present are principally exported from Austria, France, and England. Austria's principal Persian markets for her woollen goods are Teheran and Tabriz. The woolens sold are of good quality and the coloring matter used is of the best; besides which the prices are said to be comparatively moderate.

Half-wool stuffs, serges and combed woollen goods, single-color and fancy goods, in combinations of black, gray, brown, and dark-blue colors, are the best sellers. The quality of these goods is, of course, much below the best Bradford standard, but the latter are too high priced to compete with the much lower priced Austrian article.

Owing to the difficulties of transportation, which is principally over the Trebizond route, the goods are packed in small, round, waterproof, linen-covered bales, the edges of which are strongly protected against rough usage on the way. The weight of each bale should not exceed 250 pounds. It is stated that the outside wrappers of these bales can be sold to good advantage in the Persian towns, so that nothing is lost, but much is gained by the good packing of woollen goods for the Persian markets.

OLIVER J. D. HUGHES,
COBURG, GERMANY, *September 17, 1903.* *Consul-General.*

FOREIGN TRADE OF SIBERIA.

(From United States Consul-General Guenther, Frankfort, Germany.)

An article in the German Export Review states that while eastern Siberia is but sparsely settled, the extensive territory lying east of Lake Baikal contains 10,000,000 inhabitants who are making progress in civilization and whose wants are on the increase.

The introduction of European manufactures is managed through native houses. All the cities of importance of eastern Siberia have

for years had large commercial houses. Germany has already gained a firm foothold in these markets and has a monopoly of the trade in most articles.

English exports to eastern Siberia consist principally of coal, tinned sheet iron for roofing, nails, and other metal goods. On account of the discontinuance of the free harbor at Vladivostock, and the new Russian customs tariff of 1902, the English imports of fancy and textile goods, as well as of preserved food articles, sardines, milk, etc., which were specialties of English trade, have greatly decreased.

The best opportunities for the operations of American manufacturers is in the introduction of machinery and implements for mining.

The principal demand at present is for machinery for coal mines. Coal mining in Siberia is yet in its infancy, but as the supply of wood for fuel is diminishing mining of coal will become a necessity, and with the development of the industry will come a demand for boring and hoisting machinery, boilers, light railroad material, etc.

Carpenters' and blacksmiths' tools are sold in large quantities. This trade is in the hands of the Germans. As metal goods are dutiable on the weight, the lightest kinds of such wares form the principal imports.

Manufacturers of the United States have almost monopolized the trade in firearms, and keep large stocks of their goods in the country.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *September 18, 1903.* *Consul-General.*

HERRING FISHING IN BELGIUM.

(From United States Consul Roosevelt, Brussels, Belgium.)

In view of the enormous quantity of herrings consumed in Belgium, a number of Belgians, associated with Dutch capitalists, are now organizing a company for the purpose of exploiting the herring fisheries with a steam fleet.

In 1901 Belgium imported from Holland 6,600,000 kilograms (14,520,000 pounds) of salted and smoked herrings. About the same amount was imported from France and England. In Holland the importance of herring fishing is annually increasing. In 1900 the Dutch fleet numbered 619 boats; in 1901, 643; in 1902, 686; and in 1903, 786. Some of the principal companies in Holland engaged in this trade pay a dividend as high as 13 per cent. Other companies during the past ten years have paid annual dividends averaging 9 per cent.

When it is considered that the Dutch fishers must seek foreign markets for about 90 per cent of their product, among which Belgium is one of the most important, it is surprising that Belgian capitalists have not sooner created a national fishing fleet. Formerly, Germany was dependent upon foreign countries for its supply of herrings, but understanding the advantages and necessities of a national fleet, she now owns a number of boats, providing very nearly the entire amount of fish required for home consumption.

The promoters of the enterprise in this country are members of Parliament, owners of fisheries, and fish brokers. In their efforts to interest their compatriots in this new venture they are encouraged by the King, who, in a recent address at Bruges, pointed out the great advantages to be derived by the country in directing its energy toward working the valuable resources of the sea.

GEO. W. ROOSEVELT, *Consul.*

BRUSSELS, BELGIUM, *October 10, 1903.*

NEW HARBOR WORKS OF RIO DE JANEIRO.

(From United States Consul-General Seeger, Rio de Janeiro, Brazil.)

The contract for the new Rio harbor works has been awarded to Messrs. C. H. Walker & Co., of London, who signed the contract on September 24.

The agreement provides for the building of a sea wall, or quay, 3,500 meters (11,649 feet) long, beginning at the naval arsenal and running westward, and for the dredging of a channel 250 meters (820 feet) wide and from 8 to 10 meters (26 to 33 feet) deep at mean tide along the quay. The level of the quay will be 2 meters (6.6 feet) above the highest tides. At most points the levee will be at some distance out from the present sea front, especially as the wall will be constructed only in straight lines and wide curves, and will not follow the present small indentations of the shore. A large hill will be completely razed to furnish part of the material for filling in this space.

The work will be commenced on March 31 next and must be completed by June 30, 1910. Five hundred meters (1,640 feet) of quay and channel must be completed by June 30, 1906, 500 meters in 1907, 800 meters (2,594 feet) in 1908, 700 meters (2,280 feet) in 1909, and the remaining 1,000 meters (3,280 feet) in 1910.

For the construction of the wall caissons of compressed air will be used, according to the system used by Hersent in the construction of the Escalda quay at Antwerp.

Payments will be made for every 100 meters (328 feet) of the quay completed, the work done each month being paid for by the 15th

of the month following. The prices agreed upon are as follows: Dredging, 2s. 6d. (61 cents) per cubic meter (35.316 cubic feet); filling in, 3s. 6d. (85 cents) per cubic meter; for the wall of the quay, £450 (\$2,189.92) per linear meter (3.28 feet); removing rock in channel, £2 per cubic meter (\$9.73 per 35.316 cubic feet).

The contractor will commence work on January 2, 1904. There is some danger that the effect of this enterprise on the sanitary condition of Rio will be the same as it was during similar constructions in the city of Santos some years ago and in Buenos Ayers when the first levee works were built, about thirty years ago. The mortality in those cities upon those occasions was appalling.

EUGENE SEEGER, *Consul-General.*

RIO DE JANEIRO, BRAZIL, *September 27, 1903.*

MANUFACTURE OF ICE IN PALESTINE.

(*From United States Consul Merrill, Jerusalem, Syria.*)

There is a small ice plant in Jerusalem, which has been in operation for three years. An oil engine of 3 horsepower furnishes the power; the freezer is of French manufacture. The sale of ice amounts to about 700 pounds a day and the capacity of the works is about 1,400 pounds daily. The selling price is 5 cents a kilogram (2.2 pounds). Never before in this country have the inhabitants used ice, or seen it in fact. The demand at present is limited, but is steadily increasing.

At Yafa, the seaport of Jerusalem, the ice business was established about 1890 on a small scale and for several years the business was not successful; but in 1899, as the demand for ice was on the increase, the works were enlarged and since then have been operated quite successfully. The engine used is of German manufacture; oil is used for fuel. The present daily demand is for about 1,500 pounds and the capacity of the works is about 4,500 pounds. The price is the same as charged in Jerusalem—5 cents per kilogram. When the works were first established the price was 10 cents per kilogram. The water in Yafa comes from wells and, owing to their proximity to the sea, is brackish. The ice is never clear, and when melted leaves considerable sediment. The water used in Jerusalem is rain water, from cisterns, and the ice is like crystal. No natural ice is brought to this country. The demand for ice was first made by the hospitals; the hotels soon after began its use, and now nearly all the foreign residents and many of the wealthy native families are consumers.

SELAH MERRILL, *Consul.*

JERUSALEM, SYRIA, *September 22, 1903.*

COCOANUT OIL IN HUNGARY.

(From United States Consul Chester, Budapest, Hungary.)

Owing to the rise in the price of lard cocoanut oil in a solid state (cocoa butter) has been declared for entry in large quantities, it being in a refined state particularly suitable for cooking and especially for sweet pastry. As a consequence the lard and butter dealers of Budapest have made a complaint to the Department of Finance that the imported artificial butter ought to pay, instead of 1 gold florin (48.2 cents) per 100 kilograms (220.46 pounds) as "oil for industrial purposes," 10 gold florins (\$4.82) as "lard substitute."

While it is not probable that this complaint will be sustained a movement has been started to include under paragraph 70 of the proposed new tariff the crude or partly refined cocoa butter, suitable for technical purposes only, and to classify the refined cocoa butter as lard substitute and food under section 65 with a duty of 10 gold florins (\$4.82). The result of the movement is that the Budapest importers are employing the proposed rate of duty in their calculations with foreign exporters of the article.

Hungary imported from the United States in the calendar year 1902 121 metric centners (26,675 pounds) of cocoa oil or butter, valued at 9,075 crowns (\$1,841).

The following countries compete in the export of cocoa butter to Hungary:

	Pounds.
China	1, 199, 963
Austria.....	840, 930
Germany	285, 034
Brazil	12, 125
Italy	6, 393

FRANK DYER CHESTER, *Consul.*

BUDAPEST, HUNGARY, *September 28, 1903.*

EXPORTS FROM SENEGAL IN 1902.

(Prepared in the Bureau of Statistics from *Nachrichten für Handel und Industrie* of September 4, 1903.)

Peanuts.—The peanut crop of 1902 in Senegal was about 10,000 tons less than that of 1901 and prices rose to a point never before reached. While the average price in Rufisque, the principal market, did not exceed \$3.38 per 220.46 pounds, during the last days of the

season the price reached \$5.30. This situation was due to the favorable condition of the oil market in Europe, the result of the scarcity of sesame in India. On the whole this increase in price depressed the general condition of business instead of helping it, and many firms close the year with a considerable deficit, inasmuch as they had sold most of their stock before the rise in price. The quantity and destination of peanuts exported is shown in the following table:

Country.	Quantity.	
	<i>Kilograms.</i>	<i>Tons.*</i>
France.....	83,649,332	92,214
Holland.....	13,381,213	14,759
Germany.....	10,873,503	11,982
England	77,287	85
All other countries.....	2,243,000	2,467
Total.....	110,224,735	121,507

* Tons of 2,000 pounds each.

The quantity of peanuts exported to Germany increases yearly; during the season of 1902 it amounted to 2,500 tons more than in the previous year, notwithstanding the decreased crop. The largest dealers are in France. In Bordeaux and Marseilles the peanut trade is handled by brokers and the larger German factories also buy through brokers. The peanuts shipped to England are of choice quality; they are carefully sorted and shipped in bags. They are bought by grocers, who sell them to confectioners. The price is, on the average, 10 francs per 100 kilograms (\$1.93 per 220.46 pounds) higher than the current price for the usual grade, owing to the cost of sorting in Senegal.

The crop of 1903 exceeded that of last year by about 50 per cent. The natives, encouraged by the high prices of last year, planted a larger acreage, and the natural consequence of the overproduction, together with the extraordinary crop of sesame, was a rapid fall of the price quotations in Europe. Nuts from Rufisque, which in 1902 were quoted up to 33 francs (\$6.37), are now quoted at 21 francs (\$4.05).

Gum arabic.—The price of gum arabic shows no noteworthy change. The average price for the better sorts (bas du flueve) was 60 centimes per kilogram (11.6 cents per 2.2 pounds) and for the Sudan article 40 to 60 centimes (7.7 to 11.6 cents). The crop was about 100 tons less than that of the previous year. All gum arabic goes to France where it is handled by a syndicate.

Rubber.—The production of rubber exceeded that of last year by about 100 tons. The favorable condition of the market and the high

prices in Europe induced the natives to give this product more attention. The buying price for the best sorts reached 6 francs per kilogram (\$1.16 per 2.2 pounds). Exports were as follows:

Country.	Quantity.	
	<i>Kilograms.</i>	<i>Pounds.</i>
France.....	471,992	1,036,182
England	43,223	95,090
Germany.....	34,658	76,247

In former years most of the rubber from Senegal was shipped to England, but of late the trade has centered at Bordeaux.

PLASTER INDUSTRY IN AMOY.

(From United States Vice-Consul Johnson, Amoy, China.)

Plaster of paris is not an article of commerce here. It is imported only in small quantities by the two foreign hospitals for surgical purposes.

Gypsum, which is said to be quarried near Shanghai, is imported in moderate quantities and, strange as it may seem, is said to be used by the Chinese principally as a medicine. The imports of gypsum in 1901 amounted to 129,276 pounds, valued at \$1,134.

The annual consumption of calcined plaster and wall plaster can not be estimated, but it is very large. Most Chinese houses are built of cheap brick, and are plastered both inside and out. Large quantities of plaster are also used for the making of Chinese graves, almost all of them being entirely covered with it.

The lime used in building, etc., is entirely of local manufacture. In this locality it is procured by burning oyster shells. In the interior of the Province it is made from limestone. It sells in this port for about 75 cents per 100 pounds.

For the better class of houses and graves it is customary to use one-third each of earth, sand, and lime, with a varying amount of Portland cement. This is imported from Hongkong, usually in barrels of 375 pounds each. This cement, which comes from Green Island, near Macao, is increasing in use for graves on account of its durability. The imports for 1901, the latest data available, amounted to 121,562 pounds, valued at \$1,133.

CARL JOHNSON,
Vice-Consul, in Charge.

AMOY, CHINA, *August 19, 1903.*

No 280—03—12

NITRATE PRODUCTION AND TRADE OF CHILE.

(From United States Consul Mansfield, Valparaiso, Chile.)

The production and exportation of nitrate, the world's supply of which comes chiefly from Chile, is regulated and controlled by an association with headquarters in Valparaiso. The reports of this association, giving exportation, consumption, and quotas assigned to the various producing properties, contain statistics and information of general interest to the commercial world. The association recently issued a circular, from which the following figures are taken.

STOCK ON HAND AND EXPORTS.

The stock on hand on January 1, 1902, amounted to 313,747 tons, and the output during the year was 1,494,209 tons—a total of 1,808,956 tons. From this total 27,387 tons, used by the producers for powder, and 1,504,472 tons exported, were deducted, leaving a stock on the coast on December 31, 1902, of 277,097 tons. On the same date the stock abroad amounted to 824,113 tons, leaving a total on the coast and abroad of 1,101,210 tons.

For 1902-3, the exportation quotas amounted to 1,668,486 tons. On March 31, 1903, the stock on the coast was given at 269,923 tons, and that abroad at 518,136 tons—a total of 788,059 tons.

In course of half the year five new works joined the association, making in all twenty-four "officinas," or producing plants, operating under the combination.

PRODUCTION BY OFFICINAS.

The twenty-four plants, or oficinas, with the production allotted for the year, are as follows:

Officina.	Production.	Officina.	Production.
	Tons.		Tons.
Lagunas	35,000	Empress	66,000
Keryma	9,000	Recuerdo	19,200
Mapocho	17,500	Palmira	7,150
Mercedes	10,750	San Lorenzo	27,500
Angela	28,350	Napried	5,750
Esperanza	18,000	California	30,000
Rica Aventura	66,000	Dalmacia	14,500
Pepita	57,600	Slavonia	14,000
Camina	30,000	Ballena	40,000
Sloga	13,800	Lastinia	52,000
Sebastopol	9,250	San Enrique	10,000
Pan de Azucar	30,000		
Grutas	44,000	Total	655,350

To this total there will soon be added quotas for the following plants or oficinas, which are ready to enter the combination: Jaspampa Bajo, Chile, Alemania, Esmeralda, Florencia, and Cota; in addition to which are to be reckoned the output of several intended new works and those which may be opened upon the Government nitrate grounds to be sold in November.

The total exportation for 1903-4 has been fixed at 1,625,000 tons.

WORLD'S CONSUMPTION OF NITRATE.

The world's consumption of nitrate in the years ended March 31, 1901-2 and 1902-3, was as follows:

Consumption in—	1901-2.	1902-3.
	<i>Tons.</i>	<i>Tons.</i>
Europe.....	1,173,207	1,296,694
United States: *		
East coast.....	175,649	229,288
West coast.....	29,636	30,705
Chile.....	1,445	1,891
All other countries.....	19,155	19,464
Total	1,399,092	1,578,042

* In a report upon the nitrate trade of Chile from Consul-General Walker, Bogotá, Colombia, December 28, 1889 (CONSULAR REPORTS No. 114), it is stated that the United States at that date did not figure as an importer of Chilean nitrate, and the consul-general recommended its use to our agriculturists and manufacturers of explosives.

These figures show that the exportations, as fixed by the association, for 1902-3 exceeded those of 1901-2 by 178,950 tons, and that the quota for 1903-4 is in excess of that for the previous year by 47,009 tons.

LIFE OF THE NITRATE SUPPLY.

Francisco Valdes Vergara, collector of customs at the port of Valparaiso and one of the most competent statisticians in the Republic, recently made an estimate of the probable life of the nitrate product of Chile. The calculation is based upon the original estimate of the supply and the production and exportation since 1840. The following figures show in metric tons* the exportation of nitrate by quinquennial periods from 1840 to December 31, 1903:

* Metric tons of 2,204.6 pounds. The preceding reductions by the consul were made on the basis of 2,000 pounds per ton; those beginning with the "Life of the nitrate supply" (Chilean official) are on the basis of the metric ton.

Period.	Total ex-ports.	Annual av-erage.	Increase.
	<i>Tons.</i>	<i>Tons.</i>	<i>Per cent.</i>
1840-1844.....	73,232	14,646	.....
1845-1849.....	94,806	18,961	30
1850-1854.....	149,960	29,922	59
1855-1859.....	259,394	51,879	73
1860-1864.....	327,034	65,407	26
1865-1869.....	487,324	97,465	49
1870-1874.....	1,095,628	219,125	124
1875-1879.....	1,365,418	273,083	25
1880-1884.....	2,220,926	444,185	62
1885-1889.....	3,318,520	663,704	49
1890-1894.....	4,813,670	962,734	45
1895-1899.....	6,204,636	1,240,927	29
1900-1903 (4 years).....	5,537,396	1,384,349	11½
Total.....	25,947,944	.....	.....

The nitrate producers have fixed the quota for exportation, for the year ending March 31, 1904, at 32,500,000 Spanish quintals (1,529,311 tons). It is calculated that the shipments to December 31, 1903, will reach in the aggregate 31,000,000 quintals (1,426,000 tons), which calculation is taken as a basis for the foregoing table.

The following is a translation of portions of the report by Señor Valdes Vergara:

The figures quoted in the foregoing table show that exportations of nitrate have increased constantly during the period covered. Dividing the time referred to into periods of twenty years, it is shown that the average term of the increase for every five years has been 47 per cent between 1845 and 1864, 65 per cent from 1865 to 1884, and 33.8 per cent between the years 1885 and 1903.

To calculate the probable average for every five years in the next twenty years it is necessary to take into consideration (1) that the effective power of annual production of the oficinas, or manufacturing plants, is more than 2,000,000 tons; (2) that there are private properties containing at least 35,000,000 tons of nitrate; (3) that in the Government properties exists a reserve that the fiscal delegation estimates at 30,000,000 tons; and (4) that the increase of population and wealth of the world requires from year to year a greater quantity of nutritious substances, which is shown by a larger demand for fertilizers.

The consumption of nitrate is constantly increasing in the United States, and the indications are that the demands of that market will be much larger in the future.

The Argentine Republic, in which are now cultivated 6,000,000 hectares (14,826,000 acres) and from which are exported 5,000,000 tons of wheat, corn, and linseed, will, in the future, require large quantities of nitrate to maintain the fertility of its farm lands. Japan and other countries will find themselves in a similar position, which indicates a still greater demand for nitrate as a fertilizer.

It has been claimed that the scarcity of labor may affect the output of nitrate. It is estimated that each laborer in the works produces 55 tons of nitrate per year. For various reasons the quantity produced by each laborer has decreased 30 per cent since 1880. This decrease in the percentage of output by the workmen has

given rise to the apprehension that it might reduce the production to such an extent that the supply would not meet the increasing demand. But there seems little danger of a scarcity of labor in the nitrate fields. In some of the Provinces wages are very low, which is an indication that there is small demand for well-paid labor. The better class of workmen in the nitrate works receive on an average about 6 pesos (\$2.19) per day. This fact is sufficient to attract laborers from other sections of Chile and from Peru and Bolivia, where wages are only about 60 to 80 cents Chilean currency (22 to 29 cents) per day, when the demand comes for a greater number of workers in the nitrate fields.

In view of these conditions, it seem reasonable to estimate at 10 per cent the average of the increase for every five years during the next twenty years, which gives the following result in metric tons:

Period.	Probable exportation.	Annual aver- age.
	<i>Tons.</i>	<i>Tons.</i>
1904-1908	7,613,915	1,522,783
1909-1913	8,375,305	1,675,061
1914-1918	9,212,835	1,842,567
1919-1923	10,134,125	2,026,823
Total.....	35,336,180	.....

By a law enacted in 1880, the exportation of nitrate was taxed \$1.60 Chilean silver currency per metric quintal. At the value silver possessed at that time, the tax was equivalent to \$1.21 United States currency. This law was amended in 1897 and the tax fixed at 3.38 pesos Chilean gold (\$1.19). The following table shows the amount of the tax collected for every five years and the annual average for each period, the amounts being stated in United States currency:

Period.	Amount collected.	Annual av- erage.
1880-1884	\$27,399,955	\$5,479,591
1885-1889	40,940,581	8,188,116
1890-1894	59,386,246	11,877,229
1895-1899	76,990,713	15,398,142
1900-1903 (4 years).....	68,314,854	17,076,214
Total.....	273,032,349	.....

If the exportation increases at the rate of 10 per cent in every five years, and if there is no reduction in the tax, it will produce the following amounts in the next twenty years (reduced to United States currency):

Period.	Estimated returns.	Annual av- erage.
1904-1908	\$93,932,868	\$18,786,574
1909-1913	103,261,378	20,652,277
1914-1918	113,658,598	22,731,719
1919-1923	125,024,698	25,004,938
Total.....	435,876,644	.....

Without taking into account the iodine or the sale of Government lands, the nitrate has produced in twenty-four years a rental or Government income of 748,032,729 pesos (\$273,032,349), and can produce in the next twenty years 1,194,362,874 pesos (\$435,876,644).

At the end of twenty years, when 35,000,000 tons will have been extracted, it will be seen that the exhaustion of the nitrate deposits is near at hand. It is also possible that the receipts instead of increasing will show a decrease in the course of this period. There is nothing to insure to Chile for an indefinite time the enjoyment of the monopoly of which she is now possessed. If nitrate should be discovered elsewhere, or if for any reason the price of this fertilizer is greatly reduced, it will be necessary to reduce the export duty on nitrate from Chile, or abolish it entirely.

The nitrate industry contributes to-day 76.4 per cent of our exports and its operation involves the expenditure of nearly 30,000,000 pesos (\$10,950,000) for agricultural products and merchandise. It pays the Government directly 48,500,000 pesos (\$17,702,500) for export duties and no less than 10,000,000 pesos (\$3,560,000) indirectly in import duties. It would be useless to make any comments on the grave consequences which would result from anything that would compromise the prosperity of the nitrate industry in Chile. Our national life is based upon an uncertain foundation, which weakens with the course of years, and which will be permanently destroyed within a period, the duration of which is measured by the growth in the exportation of nitrate.

From the foregoing statement by a prominent official of the Chilean Government it will be observed that the end of the production is already contemplated, and that it is considered necessary to take steps to meet the emergency with which the Government will be confronted when the supply is exhausted.

R. E. MANSFIELD, *Consul.*

VALPARAISO, CHILE, *August 25, 1903.*

COMMERCIAL NOTES OF CUBA OF INTEREST TO UNITED STATES EXPORTERS.

From a report forwarded by Mr. H. G. Squiers, United States minister to Cuba, the following items of interest have been extracted. Mr. Squiers desires to acknowledge his indebtedness to Mr. J. H. Flanagan, assistant agent of the Southern Pacific Railroad Company, stationed in Habana, for much of the statistics herein. In a more general form much of the information in this report has already been published, under the title "Commercial Cuba in 1903," in the Monthly Summary of Commerce and Finance for August, 1903, issued by the Bureau of Statistics, Department of Commerce and Labor.

MATANZAS.

Population (1902), 45,282; in commercial importance Matanzas ranks sixth in imports and fifth in exports. The leading exports and imports for the six months ended June 30, 1903, were as follows:

Imports from the United States.

Article.	Quantity.	Article.	Quantity.
Meats.....kilograms...	646,995	Hardware .....kilograms...	146,347
Fish .....do.....	59,728	Machinery.....do.....	48,645
Milk condensed.....do.....	40,725	Carriages, wagons, etc.....do.....	193
Grain (corn and oats).....do.....	205,060	Lumber:	
Flour .....do.....	1,537,831	Pine, unfinished.....feet...	2,631,000
Bran .....do.....	18,900	Rough .....kilograms...	26,140
Fruits .....do.....	1,279	Furniture.....do.....	14,462
Vegetables .....do.....	70,304	Animals.....head...	957
Macaroni and vermicelli.....do.....	1,850	Oil, beer, and bottled goods.....quarts...	5,286
Miscellaneous .....do.....	213,076	Shoes .....pairs...	4,169

Exports to the United States.—Exports were very light, consisting only of small shipments of honey and timber.

Sugar.—Statistics showed that on July 31, 1903, 876,799 sacks, of 320 pounds each, had been exported; and that there were stored in warehouses 366,240 sacks.

On July 31, 1902, 354,914 sacks, of 320 pounds each, had been exported, and there were stored in warehouses 576,355 sacks.

Commercial notes.—Matanzas receives a great many cattle, a large number coming from Florida, the rest from Mobile, Galveston, and Venezuela. Venezuelan cattle sell better than those from the United States.

T. Bea & Co. are large wholesale dealers in grain and provisions, and are agents for the Munson Steamship Line.

Lombardo, Arechavaleta & Co. are prominent wholesale merchants.

Miret Brothers do a general commission and banking business. They receive an average of 2,000 sacks of corn, 100 barrels of lard, 500 sacks of flour, and 50 boxes of bacon per month from Chicago and St. Louis.

Calban & Co. import per month about 100 barrels of lard, 1,000 to 1,500 sacks of flour, 15 to 20 boxes of bacon (of about 500 pounds each), and some hams.

Suris, Gali & Co. receive about 200 sacks of flour, 25 barrels of lard, 10 boxes of bacon, and 4 cases of hams from Chicago and St. Louis.

Last year A. Solana & Co. sold about 1,000 sacks of flour and corn, some coffee, and 150 barrels of lard, purchased in Chicago and St. Louis.

J. R. Bordenave, dealer in electrical supplies, is also United States consul.

Steinburg Brothers do a large wholesale dry-goods business.

Nearly all of the dry goods sold in this market come from Europe; nothing from St. Louis and Chicago; a small amount from New York. Dealers claim that prices abroad are lower than in the United States.

Lombardo, Arechavalet & Co., T. Bea & Co., Pablo Urrechaga, Santiago Alegria, and Celestino Rodriguez & Co., do a general wholesale and retail hardware business.

A large part of the hardware handled here comes from New York; although considerable sugar machinery, iron pipe, and heavy hardware is imported from England and Belgium; some business is done with St Louis, Mo.

Port.—At present, ocean-going vessels can not come to the wharf. Ships drawing more than 10 feet anchor about half a mile from the wharf, loading and unloading cargo on lighters; the lighter charges varying from 65 cents to \$1 per ton, including wharfage.

New wharf and warehouse.—Snare & Triest, contractors of New York, are building a new wharf and constructing 4 miles of railroad and sidetracks for the Government. The work is now about two-thirds completed. The contract calls for the

completion of all work by April, 1904. The wharf will be 812 feet long, 270 feet of which will be trestlework, at which vessels drawing 40 feet may tie up. The depth of the water along the wharf will be 25 to 40 feet. The wharf will not be covered. In connection with this wharf there is to be constructed a warehouse 200 by 30 feet located 400 feet from the land end of the wharf. There will be a railroad track on the sea side of the house and a 40-foot wagon road on the land side. The wharf will have railroad tracks, so that it will be possible to handle cargoes direct. The wharf, warehouse, and tracks, including bridges, will be built, owned, and operated by the Cuban Government, and when completed will have cost \$400,000 United States currency. The location of the wharf is about three-fourths of a mile from the business part of the city. The superintendent for the contractors says the wharf will be completed and turned over to the Government in about six months.

Hotels.—There are several first-class hotels in the city with rates ranging from \$2.50 to \$4 in American currency per day.

NUEVITAS.

This city is located in the Province of Puerto Principe. The population is 10,355. It ranks tenth in imports and eighth in exports. It is a port of entry for the city of Puerto Principe, capital of the Province.

Port.—Ships drawing more than 18 feet must anchor 2 miles from the wharf (which is owned by a private firm) and use lighters. The anchorage is considered safe. The lighterage charges, including wharfage, are 14 cents per cargo, or 200 pounds. Should ships anchor farther out than 2 miles the charge is the same. Ships drawing 11 feet may come to the wharf.

Commercial notes.—There are several wholesale and commission houses in Nuevitas which do an extensive business in produce and provisions which are purchased principally in United States markets.

Sanchez & Co., dealers here, own a large sugar plantation; also do a great wholesale and commission business. They are agents of the Munson Line.

There are about 500 sacks of flour bought monthly in St. Louis and shipped via New York to this market.

Nuevitas is about 45 miles from Puerto Principe, with which it is connected by the Puerto Principe and Nuevitas Railroad, the oldest railroad in Cuba.* Nuevitas was the first place visited by Columbus, he having landed here October 28, 1492.

Imports from the United States from January 1 to July 30, 1903.

Article.	Quantity.	Article.	Quantity.
Hardware .....kilograms...	24,886	Milk, canned.....kilograms...	8,237
Machinery.....do.....	174,505	Grain (oats and corn).....do.....	984
Wagons, carriages, etc.....number...	58	Flour.....do.....	449,539
Lumber:		Fruits .....do.....	6,426
Undressed .....feet...	222,000	Vegetables .....do.....	8,357
Rough .....kilograms...	185,317	Pastes, macaroni, and vermicelli,	
Furniture.....do.....	11,340	kilograms .....kilograms...	23,757
Animals.....head...	10,786	Miscellaneous.....kilograms...	67,980
Meats.....kilograms...	163,815	Oils, bottled goods, etc.....quarts...	14,453
Fish .....do.....	27,264	Shoes .....pairs...	3,683

Exports.—In the fiscal year ended July 31, 1902, there were exported 133,700 sacks of sugar; on hand in warehouses, 5,750 sacks. In the fiscal year ended July 31, 1903, there were exported 124,215 sacks of sugar; on hand in warehouses, 5,540 sacks.

The following firms and individuals, all doing a commission business, represent the mercantile interests in Nuevitas: Sanchez & Co., Carreno Bros. & Co., Carreno, Gonzalez & Co., Inchaurrondo Astiz & Co., Rodriguez & Revilla, Andres Soravilla, and Diomisco Blasco.

They buy most of their goods in New York; some are bought in Chicago and St. Louis, but are shipped to Nuevitas via New York.

Hotels.—At the principal hotels, which are conducted on the American plan, the rates are \$2 a day.

PUERTO PRINCIPE.

This city is the capital of Puerto Principe Province. It has a population of 53,140. Importations are made through the port of Nuevitas. Puerto Principe is headquarters of the Cuba Railway Company, the general offices and shops being located in the city. A large number of Americans, engaged in stock and agricultural pursuits, are located here.

J. S. Shannon, president of the Cuban Ice Manufacturing and Developing Company, is forming a colony to locate here. The company has located a new town site within 2 miles of Puerto Principe proper and expect to settle a large number of American families from Birmingham, Ala., on their lands. Arrangements are being made to build large waterworks, etc.

CARDENAS.

This city is located in the Province of Matanzas. It has a population of 24,861 and ranks fifth in importance in importations and second in exportations.

Port.—The harbor of this city is large and well protected, but shallow. Vessels drawing more than 15 feet are compelled to anchor at Cayo Piedra, in the open sea and in a dangerous location, 15 miles from nearest wharf. Ships drawing less than 15 feet may come to Cayo Diana, within 7 miles of the wharf, and load or unload their cargo. Deep-water vessels usually anchor at 15-mile anchorage and when unloaded to 15 feet come into 7-mile anchorage and complete unloading. Ships loading sugar load to 15 feet and move out to 15-mile anchorage and complete their cargo.

M. J. Dady & Co., contracting engineers, of Brooklyn, N. Y., are dredging a channel in the harbor; their outfits are now working about 12 miles from shore. The channel will be 15,600 feet long, 150 feet wide, and 22 feet deep, and will cost \$600,000. The contract will be completed about October 15, when the contractors expect to secure a second contract to widen the channel to 300 feet. When this channel is completed vessels can come in to a safe anchorage.

Improvements.—The Cardenas and Jucaro Railway people are building a branch from Yaguaramas to Caimanera and Cardenas. It will develop an excellent sugar country. The Cuban-American Sugar Company have a large sugar refinery here and expect to effect important improvements this year.

Commercial notes.—The following are the principal commercial houses of Cardenas:

Grocery and produce merchants—Galban & Co., Estrada & Co., Suarez & Co., Mauricio Solis, Hijos de M. Bermudez, Lluria Freira & Co., Leandro Ruiz & Co.

Hardware and crockery merchants—Gonzalez & Olachea, Maribona, Perez & Co., Otero & Co., Abascal & Bro., Benito Framil, Zabaleta & Co., Luis Arechaederra, Vicente Gonzalez Suya.

Hardware merchants—Pedro Etchegoyen, Manuel Zaldo, Empresa de Cardenas & Jucaro.

Lumber merchants—Yglesias Diaz & Co., Vila y Martinez.

The imports into Cardenas from the United States from January 1, 1903, to June 30, 1903, were as follows:

Imports from the United States.

Article.	Quantity.	Article.	Quantity.
Hardware .....kilograms...	155,429	Canned good, produce, groceries, etc.:	
Machinery.....do.....	140,258	Meats.....kilograms...	385,871
Wagons, carriages, etc.....number...	15	Fish .....do.....	23,033
Lumber:		Milk .....do.....	34,295
Undressed .....feet...	3,291,000	Grain (corn and oats).....do.....	195,976
Timbers .....kilograms...	179,954	Flour.....do.....	897,654
Furniture.....do.....	34,722	Vegetables .....do.....	49,726
Animals.....head...	2,521	Pastegoods,macaroni,etc.do.....	24,589
Oils and drinks.....kilograms...	2,628	Miscellaneous .....do.....	87,719
Shoes .....pairs...	885		

Exports.—The principal exports to the United States for the same period consisted of 673,968 sacks of sugar.

There were in addition occasional small shipments of honey in casks and mahogany and cedar timber to New York.

Sugar.—The statistical position of sugar at this port on July 31, 1903, was as follows: Sugar in warehouses and on hand, 392,776 sacks. Compared with the same period in 1902, exports were 427,237 sacks, while sugar in warehouses July 31, 1902, amounted to 648,512 sacks.

Hotels.—There are several good hotels in Cardenas, all conducted on the American plan. The rates are \$2 to \$3 in United States currency per day.

CAIBARIEN.

This city is located in the Province of Santa Clara and has a population of 8,650. It ranks ninth in imports and sixth in exports.

Port.—The harbor here is shallow. Ships drawing more than 8 feet must anchor 18 miles out, near a small island called Frances. Anchorage is considered fair. Vessels drawing 8 feet may enter the harbor and tie to the wharf.

Commercial notes.—Martinez & Co. do a general commission business in grain and produce. They contract large shipments of sugar and receive from 120 to 150 tons of freight from the United States every month.

A. Romanach & Co., general commission and produce dealers, also sell barbed wire, flour, etc. They are agents for the Larrinaga Steamship Line.

Hernandez & Mata are wholesale dealers in produce and do a general commission business. They received on the last ship from New York 300 sacks of corn, 200 sacks of flour, 100 tierces of lard (of 550 pounds each), 20 cases of bacon, and 10 cases of sausage. These figures represent their average monthly receipts.

R. Cantera & Co., commission merchants and general importers, receive about 80 tons of merchandise per month.

Meave & Co. are large wholesale and retail dealers in lumber and furniture. They receive a large amount of lumber from Mobile; also from Florida.

Imaz & Co. are wholesale and retail hardware dealers and purchase the greater portion of their imports from manufacturers and dealers in the United States. They buy barbed wire in the United States and England. There is a cheaper rate from England.

The following are the principal commercial houses of Caibarien:

Hardware merchants—Imaz & Co.

Produce and commission merchants—Martinez & Co., R. Cantera & Co., A. Romanach & Co., Hernandez & Mata, Juan Vidal.

Lumber merchants—Meave & Co., Antonio A. Acevedo.

Sugar exporters—Zereya & Co., Herrera Brothers, Lopez & Co., Martinez & Co.

Sugar plantations.—A table showing the sugar plantations tributary to Caibarien, with a conservative estimate of what they will produce this year, follows:

Plantation.	Bags.	Plantation.	Bags.
Victoria	75,000	Zaza	100,000
Marcisa	80,000	Alta Mira.....	33,000
San Agustin.....	65,000	Rosalia	28,000
San José.....	22,000	Fidencia	16,000
Adela	75,000	Fe	55,000
San Pablo.....	18,000	Reforma	28,000

Imports.—The imports from the United States for the period from January 1, 1903, to June 30, 1903, were as follows:

Imports from the United States.

Article.	Quantity.	Article.	Quantity.
Hardware .....kilograms...	30,166	Milk, canned.....kilograms...	49
Machinery.....do.....	18,729	Grain, corn, and oats.....do.....	11,522
Carriages and wagons.....number...	139	Flour.....do.....	766,023
Lumber:		Bran.....do.....	8,100
Undressed .....feet...	469,000	Vegetables.....do.....	21,456
Timbers .....kilograms...	364,824	Pastes, macaroni, and vermicelli,	
Furniture.....do.....	439	kilograms.....	11,824
Animals .....head...	452	Miscellaneous .....kilograms...	197,604
Meats.....kilograms...	508,205	Oils, bottled goods, etc.....quarts...	312,069
Fish .....do.....	7,640	Shoes .....pairs...	720

Exports.—In addition to the considerable shipments of sugar, the exports to the United States consisted only of some small shipments of honey and mahogany and cedar logs, all to New York.

Sugar.—There was exported during the fiscal year ended June 30, 1902, 156,431 bags; on hand in warehouses, 202,200 bags. Exported during fiscal year ended June 30, 1903, 255,618 bags; on hand in warehouses, 190,475 bags.

Hotels.—The several good hotels here charge \$2 to \$2.50 per day. All are conducted on the American plan.

CIENFUEGOS.

This city is located in Santa Clara Province and has a population of 59,128. It ranks third in importance with reference to importations and fourth in exportations, and bids fair to become Cuba's principal sugar port.

Port.—There is a fine, large, and well-protected harbor. Vessels drawing more than 16 feet may approach within half a mile of the wharf and unload and load by lighter. Ships drawing 16 feet and less may go alongside wharf owned by Balbin, Valle & Co. Munson & Ward Line boats have no trouble loading and unloading at this wharf. It will hold four ships at once, two of which may draw 16 feet.

Commercial notes.—The following firms represent the principal business interests of Cienfuegos:

Hardware—Carlos J. Trujillo, José Llovio, Antonio Capperi, H. W. Klittke & Co.

Dry goods and clothing—Sierra, Gomez & Co.; Villanueva, Rangel & Novoa; Carbonel, Claret & Co.

Groceries and produce—Nicolas Castaño; Cardona & Co.; Sanchez, Cabruja & Co.; Vega, Capetillo & Co.; Planas & Co.; Jorge Mont; T. Ferrer.

Lumber—P. Castaño, S. Garriga.

Nicolas Castaño does a general banking and commission business. He owns a small wharf that can accommodate two ships drawing 14 feet. The Ward Line, which has a weekly service into Cienfuegos from New York, consigns every other ship to Mr. Castaño.

Balbin, Valle & Co. do a big banking and commission business. They own a fine building and a wharf and warehouses, and are agents for several large sugar estates. Attached to their wharf Balbin & Valle had stored in their enormous warehouse some 30,000 sacks of sugar.

P. Castaño, wholesale lumber dealer, receives large shipments of pine and spruce from Nova Scotia, usually in sailing vessels. He stated that he would pay more for lumber and a higher freight rate if he could get it nearer home.

Villanueva, Rangel & Novoa are general importers of dry goods.

Sanchez Cabruja & Co. do a large banking and commission business. They purchase largely in western provision markets.

Cardona & Co. do a general commission business in grain, produce, etc. They receive about 350 tons per month.

H. W. Klittke & Co. are wholesale and retail hardware dealers. They purchase largely in the central and western markets of the United States.

José Loiro does an extensive business in hardware and agricultural implements.

Carlos Trujillo is a leading hardware dealer and handles goods of American manufacture almost exclusively.

Sugar plantations.—The sugar plantations which are feeders to the trade of Cienfuegos, with the amount of their product in the season of 1902-3, are shown in the table following:

Plantation.	Bags.	Plantation.	Bags.
Caracas	200,000	Portugalete	56,000
Constancia.....	116,000	Dos Hermanos.....	55,000
Hormiguero.....	112,000	Cieneguita	55,000
Dos Hermanas.....	96,000	Juragua.....	52,000
Soledad	73,000	San Francisco.....	45,000
Manuelita.....	69,000	Santa Maria.....	45,000
San Agustin.....	65,000	San Lino.....	35,000
Andreita	65,000	Pastora	35,000
Loqueitio	62,000	Carolina	12,000
Santa Rosa.....	62,000		
Santisima Trinidad.....	58,000	Total.....	1,368,000

This output will be equal to 222,300 tons of 2,000 pounds each.

Imports and exports.—The following is a list of imports from the United States during the fiscal year of 1902-3, and for the five months ended June 1, 1903.

Imports from the United States.

FISCAL YEAR 1902-3.

Article.	Quantity.	Article.	Quantity.
Coffee .....pounds...	1,858,582	Oleomargarine .....pounds...	43,898
Beer .....dozen...	14,958	Butter .....do.....	29
Pease .....kilograms...	67,916	Corn.....do.....	416,249
Crackers.....pounds...	91,197	Lard.....do.....	5,704,208
Flour .....barrels...	47,307	Kerosene oil.....gallons...	358,964
Hams and shoulders.....pounds...	220,019	Salt pork.....pounds...	699,435
Beans.....kilograms...	186,919	Chewing tobacco.....kilograms...	27,496
Condensed milk.....pounds...	60,941	Shoes .....pairs...	14,501
Candy, etc.....do.....	5,452		

FIVE MONTHS ENDED JUNE 1, 1903.

Hardware .....kilograms...	467,069	Milk, canned.....kilograms...	29,617
Machinery.....do.....	708,933	Grain (corn and oats).....do.....	29,136
Carriages and wagons.....number...	467	Flour .....do.....	1,883,685
Lumber:		Bran.....do.....	3,600
Rough .....feet...	2,496,000	Fruit .....do.....	3,406
Timbered.....kilograms...	297,060	Vegetables .....do.....	120,107
Furniture.....do.....	47,326	Pastes, macaroni, etc.....do.....	85,030
Animals.....number...	904	Miscellaneous .....do.....	431,876
Meats.....kilograms...	1,693,563	Oils and bottled goods.....liters...	33,268
Fish .....do.....	91,837	Shoes .....pairs...	9,071

Exports.—The exports to the United States included honey in barrels to the amount of \$4,973.94; tobacco, \$248,242; and some mahogany and cedar.

Sugar.—The amount of sugar exported during the fiscal 1902 was 767,150 sacks, and there was on hand in warehouses July 31, 1902, 110,991 sacks. During the fiscal year 1903 there was exported 1,067,621 sacks; on hand in warehouses July 31, 1903, 93,575 sacks, an increase of 283,055 sacks of 320 pounds each.

AMERICAN COLONY OF TRINIDAD.

At Trinidad, a small port on the south coast, about 42 miles southeast of Cienfuegos, there is an American colony which has every prospect of being able to make heavy shipments of fruit to the United States next year. Trinidad is a port of entry, but the larger part of its business is done through Cienfuegos.

SANTIAGO.

This city is the capital of the Province of Santiago de Cuba. It has a population of 44,295. It ranks second in importance in importations and third in exportations.

Port.—The entrance to the harbor is narrow—about 220 yards wide; the entrance channel is about 2 miles long, with a width varying from one-eighth to five-eighths of a mile for 3 miles. The harbor gradually widens, until at its northern extremity it is about 2 miles wide and forms a safe anchorage basin. At the wharves 10 to 15 feet of water may be found; some 300 to 500 yards farther out ships drawing from 20 to 30 feet can safely anchor. The bottom of the harbor has from 2 to 3 feet of very soft mud. The following are the wharves:

Muelle de Luz, or Wharf No. 1—Patronized by north and south bound vessels and occasional tramp steamers; is 400 feet long, 50 feet wide, and uncovered; has 16 feet of water at end and 12 feet at landing.

Muelle Real—Patronized by all foreign ships; 500 feet long, 80 feet wide; 200 feet under cover at water end.

Gallego Mesa wharf, or Wharf No. 2—Used by coasting vessels. It is 210 feet long and 40 feet wide; average depth of water, 16 feet.

Cuba Company wharf—This wharf is 800 feet long, 20 feet wide, and has 14 feet of water over soft mud. There are two railway tracks on wharf end, one track running down to water's edge for unloading lighters. This wharf also has a very large derrick. There is a tram line running from Gallego Mesa wharf to the custom-house; transfer charges, 40 cents per ton from wharf to custom-house. All freight handled by the Cuba Company is dispatched by custom-house officials on wharf without additional charge.

Gallego Mesa & Co., of Santiago, have a contract to deepen the harbor, and expected to start operations about August 6. When their contract is completed ships drawing 20 feet may go alongside Wharf No. 1, owned by the Government, and Wharf No. 2, owned by Gallego Mesa & Co. They expect to have the harbor in such condition that ships drawing 20 feet can use the above wharves in sixty days from the time dredging is begun. At present, vessels drawing not more than 16½ feet may use both wharves in safety. The rates at both wharves are the same—\$20 per vessel for first three days; \$5 for each additional day; wharfage on cargo in addition, payable by consignee.

Steamship service.—The Ward Line makes no provision for embarking or landing passengers. When a passenger buys his ticket he must make his arrangements to go aboard ship. He can go on the ship's boat by paying, in addition to price of ticket, 20 cents, and 20 cents for each trunk and 10 cents for each package or bundle. The same charges are made for landing passengers and baggage. Munson Line vessels come to the wharf. The Ward Line New York service makes two trips a month to Santiago.

Gallego Mesa & Co. operate a steamer sailing the last day of each month to Port Antonio, Jamaica; also a small steamer between Santiago and Guantnamo, making two round trips a week.

Improvements.—The city government of Santiago has let the contract for the erection of a new market house, which will cost \$100,000, work to begin in about three months.

The assistant general manager of the Cuba Railway Company states that as soon as their line is completed to Nipe Bay (15 miles yet to be constructed) it is the intention of the company to form an alliance with some New York and Cuba steamship company to handle their business via Nipe Bay. The Cuba Railway Company will use every endeavor to make this the principal port of entry in the northeast coast.

Commercial notes.—The following firms represent the various leading business interests of Santiago:

Groceries and produce—Schuman & Co., Lorenzo Abascal, Eliju Ros & Co., Badell & Co., Bolivar & Montero, C. Brauet & Co., Rodriguez & Diaz, Frutia & Co., José Maria Perez, Larrea & Besalu, Agustin Massana, Parramen Arce & Co., José Prats, Francisco Robert, Eligio Ros & Co., Cuba Railroad Company, Eduardo Ramirez, P. Revira & Co., A. L. Zalazar & Co., Trillas & Bro.

Hardware—Ynglada & Co., Jaime Llovet, Virginio Porro, Spanish-American Iron Company, Elwell Mercantile Company.

Lumber—Ros Hermanos, Elwell Mercantile Company.

Liquors and beers—Camps y Hijos, Setica & Cabello.

General commission merchants—Brooks & Co.

Commission agents—Juan Real y Mas, W. B. Fair.

Exports.—The principal exports were logs, mahogany and cedar, March 30, 1902, to June 30, 1903, 804,601 feet. Honey, July, 1902, to June, 1903, about 34,450 pounds; value, \$8,864.10. Cocoa, estimated at 27,896,824 pounds; value, \$278,968.24. Sugar, 35,114,575 pounds, crop of 1902-3.

Imports from the United States, January 1 to June 30, 1903.

Article.	Quantity.	Article.	Quantity.
Hardware .....kilograms...	756,827	Milk, canned.....kilograms...	67,918
Machinery.....do.....	460,395	Eggs.....dozen...	1,170
Carriages and wagons.....number...	530	Grain .....kilograms...	222,480
Lumber:		Flour .....do.....	2,703,041
Unfinished .....feet...	25,614,000	Bran.....do.....	135,000
Timbers kilograms...	16,879	Vegetables .....do.....	206,447
Furniture.....do.....	23,312	Pastes, macaroni, etc.....do.....	128,272
Animals.....head...	4	Miscellaneous .....do.....	29,025
Meats.....kilograms...	916,191	Oils and drinks.....liters...	172,637
Fish .....do.....	57,840	Shoes .....pairs...	48,882

MANZANILLO.

This city is located in Province of Santiago de Cuba. It has a population of 32,288, and ranks fourth in importations and seventh in exportations.

Port.—There is no inclosed harbor, but a roadstead protected by islands. The Cuban chart indicates that the water is so shallow that a depth of 30 feet only is marked 3 miles from shore. Manzanillo has progressed quite rapidly in the past few years. In 1896 it was classed as twelfth in importations. The Cuban Government is making improvements in the harbor. A new railroad, the Cuban Eastern, is under construction to connect with the Cuba Railway, near Alto Cedro. This line, in connection with the Cuban Railway Company's new line from Alto Cedro to Nipe Bay, will give a direct line across the eastern end of the island from Manzanillo to Nipe Bay, and will touch two important inland towns heretofore unprovided with transportation—Bayamo, population 21,193, 25 miles from Manzanillo and 80 miles from Santiago; and Jiguaní, population 10,495, 14 miles from Bayamo; both places of considerable commercial importance.

Imports and exports.—The following table shows the classification and amount of the importations from the United States at Manzanillo from January 1, 1903, to June 30, 1903:

Article.	Quantity.	Article.	Quantity.
Hardware .....kilograms...	166,937	Milk, canned.....kilograms...	19,372
Machinery.....do.....	1,018,185	Grain (corn and oats).....do.....	23,200
Wagons, carriages, etc.....	251	Flour.....do.....	789,430
Lumber:		Bran.....do.....	2,700
Undressed .....feet...	953,000	Fruits .....do.....	5,135
Rough .....kilograms...	203,533	Vegetables .....do.....	58,999
Furniture.....do.....	29,391	Pastes, macaroni, etc.....do.....	30,363
Animals.....head...	5	Miscellaneous .....do.....	74,578
Meats.....kilograms...	322,919	Oils and bottled goods.....quarts...	39,724
Fish .....do.....	92,528	Shoes .....pairs...	3,561

The principal export was sugar, of which there was exported during the year ended July 31, 1902, 140,150 sacks, leaving on hand in warehouses 4,000 sacks. In the year ended July 31, 1903, there was exported 260,964 sacks, leaving in warehouses 9,600 sacks.

Other exports included mahogany, cedar, and old iron (ruins of sugar mills).

Improvements.—A number of the sugar mills destroyed during the late war are now being rebuilt, and prospects are good for a heavy increase of the coming sugar crop.

The following are the leading business houses: C. Brauet & Co.; Carbonell,

Mestre & Co.; Muniz, Fernandez & Co.; Iturbide & Co.; J. Muniz & Co.; Vasquez & Co. All are general commission merchants.

SAGUA LA GRANDE.

This city is on the north coast, in the Province of Santa Clara. It is 15 miles from Port Isabel, which is the port of entry for the city and with which it is connected by the Cuba Central Railway. The population is 21,342. Sagua la Grande in commercial importance ranks tenth in amount of importations and eighth in exportations.

Ships drawing more than 16 feet of water must anchor at Port Esquivel, 10 miles out, and discharge freight on lighters; the anchorage is considered safe. Ships drawing less than 16 feet can come within 2 miles of the wharf.

The lighterage rates from Port Esquivel per 1,000 kilograms are \$2.95 Spanish gold, which includes wharf charges and railroad tariff from Port Isabel to Sagua. From the 2-mile anchorage the rate is \$2.10 Spanish gold from ship side to Sagua, including all charges.

The principal business interests are represented by the following firms:

General commission and produce—Aguirre & Laca; Valentine Arenas; Galban & Co.; Garcia & Co.; Gomez, Traviesas & Co.; Juan Arenas; Munagorri & Co.

General merchandise—Miguel Arostegui.

Hardware—La Campana, M. Jorin & Co., Maribona & Co.

Whisky, wines, etc.—El Ynfierno, José Maria Boguiristani.

Imports and exports.—The following is a list of imports from the United States from January 1 to June 30, 1903: .

Article.	Quantity.	Article.	Quantity.
Hardware .....kilograms...	52,646	Flour .....kilograms...	566,072
Machinery.....do.....	168,263	Bran.....do.....	4,600
Wagons, carriages, etc.....number...	45	Fruit .....do.....	99
Lumber:		Vegetables .....do.....	5,656
Rough .....feet...	868,000	Pastes, macaroni, etc.....do.....	1,246
Timbers .....kilograms...	27,246	Miscellaneous .....do.....	28,741
Meats, bacon, etc.....do.....	214,475	Oils and drinks.....do.....	10
Fish .....do.....	7,944	Shoes .....pairs...	426
Milk, canned.....do.....	465		

Exports.—The exports of sugar for the fiscal year 1903 were 424,808 sacks; on hand in warehouses July 31, 1903, 70,410 sacks. During the fiscal year 1902 there were exported 275,437 sacks; on hand in warehouses July 31, 1902, 149,688 sacks. The increase in production amounted to 70,093 sacks. There were practically no other exports.

OUTLOOK FOR AMERICAN TRADE.

The wholesale dealers in Europe who do business in Cuba allow the Cuban merchants almost unlimited time to meet their accounts, which consideration the merchants seem to think more of than any discount for a cash or shorter payment.

There is practically no American cloth and clothing offered for sale in Cuba. Nearly all the dry goods for sale in the island are bought in European markets, only a small percentage coming from the New England States. These are bought through commission merchants in New York City. The merchants visited expressed the greatest interest in all matters of improvement and stated that they would heartily appreciate American ideas and would be glad to welcome the traveling salesman.

The average Cuban merchant greatly appreciates any small courtesy or particular act of attention shown him by the people with whom he does business.

Merchants generally report business very dull, but are hopeful of the future, and anticipate a decided increase in trade on the delivery of the next sugar crop. On the north side of the island there is little or no improvement going on among the sugar plantations, while on the south coast there is decided improvement. Almost every ship brings in some sugar machinery with which to reconstruct the mills destroyed during the late war. A large part of the sugar-mill machinery being brought into Cuba now is bought in Europe. There is a magnificent business to be developed between the United States and Cuba. Ninety per cent of the wholesale houses on the island are owned and controlled by Spaniards, who make annual trips to Spain, and on these trips buy their goods in European markets. With the change of the Spanish for the Cuban flag and the investment of several millions of American dollars in Cuban lands, this trade is gradually seeking a new outlet, and is naturally looking to the United States as the nearest and most advantageous market. European commercial representatives make semiannual trips over Cuba soliciting business, but so far few of the American commercial institutions have had representatives here; especially does this refer to the central, southern, and western sections of the United States.

**LIST OF MERCHANTS OF THE ISLAND OF CUBA ENGAGED IN THE SALE
OF GROCERIES AND PRODUCE.**

HABANA.

Alonso & Co.	Ricardo Palacio Pelaez.
Arocena Garcia & Co.	Emilio Luengas.
Hilario Astorqui.	J. M. Mantecon.
Barraque & Co.	Marcelino Suarez & Co.
Federico Bauriedel & Co.	E. R. Margarit.
Bengochea & Sobrino.	Mestra & Co.
Gonzalez Benitez & Co.	Milian Alonso & Co.
Mantecon Brothers.	Elias Miro.
Bustillo & Sobrino.	Fernandez Mogro & Co.
J. M. Berriz & Son.	Monroe Commercial Co.
Faustino Garcia Castro.	Muniategui & Co.
Ceferino Perez.	Muniz & Co.
Jesus Chicoy.	Martin Perez.
Barrios & Coello.	Inocencio Pardo.
Oliver Bellsoley & Co.	R. Perez & Co.
Costa Fernandez & Co.	Quesada & Perez.
Avelino Campos.	Ricardo Garcia.
Crestobal Negra & Co.	Romagosa & Co.
Dalmau Lamiguiero & Co.	José Alvarez & Ruiz.
Manuel Sobrino.	Salceda Roda & Co.
Dussaq & Co.	Salom & Co.
Hijos de Estanislao Alvarez & Co.	Sisniega Isla & Co.
Echevarri Lezama & Co.	Suero & Co.
Friedlein & Co.	Guillermo Terry & Co.
Galban & Co.	Ramon Torregrosa.
Galbe & Brothers.	Viadero & Velasco.
Fernandez Garcia & Co.	Villaverde & Co.
Garcia Brothers & Co.	Wen Ong.
Alonso Garin & Co.	Gonzalez Weiss & Co.
Marcelino Gonzalez & Co.	Wickes Carnicer & Co.
Juan Carbonell.	M. A. Zaldivar.

MATANZAS.

G. Alvarez & Co.
T. Bea & Co.
Canizo & Co.
Galban & Co.
Lombardo Arechavaleta & Co.
Miret & Bros.

Saturnino Ortiz.
A. Solaun & Co.
Suris Gali & Co.
L. Serpa.
A. Ugarte.

CIENFUEGOS.

S. Balbin & Valle.
Sanchez Cabruja & Co.
Cardona & Co.
Nicolas Castano.
Jorge Mont.

Orfila Casero & Co.
Planas & Co.
Perez Ortiz & Valle.
Vega Capetillo & Co.

SANTIAGO.

Lorenzo Abascal.
Badell & Co.
Bolivar & Montero.
C. Brauet & Co.
Rodriguez & Diaz.
Furtia & Co.
Jose Maria Perez.
Larrea & Besalu.
Agustin Massana.

Paramon Arce & Co..
Jose Prats.
Francisco Robert.
Eligio Ros & Co.
Cuba Railroad Company.
Eduardo Ramirez.
P. Rovira & Co.
A. L. Salazar & Co.
Trillas & Bro.

SAGUA LA GRANDE.

Aguirre & Laca.
Valentin Arenas.
Calban & Co.
Garcia & Co.

Gomez Traviesas & Co.
Juan Arenas.
Munagorri & Co.

CARDENAS.

Bermudez & Menendez.
Laurrari & Busto.
Garcia & Co.
Jose Gonzalez Coto.
Estrada & Co.
Hijos de Manuel Bermudez.

L. Luria & Co.
Jose Menendez.
Pedemonte & Co.
Suarez & Co.
S. T. Tolon & Co.

NUEVITAS.

Berban Sanchez Adam.
Carreras Brothers & Co.

Tomeu Janer & Co.
Vicente Rodriguez & Co.

BARACOA.

Adolfo R. Arguelles.
J. Simon & Co.

José Abalo.

SANTA CLARA.

R. Alvarez & Co.
Manuel Custo.

R. Gonzalez & Sobrino.
Maximo Garcia.

GUANTANAMO.

C. Brauet & Co.
Brooks & Co.
Segundo Caamano.
Inglada Vives & Francoli.

Teodoro Jouanneau.
R. Mola & Co.
Soler Pubillones & Co.
Monner Llossas & Ferret.

MANZANILLO.

C. Brauet & Co.
Carbonell Mestre & Co.
Muniz Fernandez & Co.

Iturbe & Co.
J. Muniz & Co.
Vasquez & Co.

GIBARA.

Cuervo & Co.
Goitia & Co.
Longoria & Co.
Rey Bro. & Co.

Manuel de Silva.
Torre & Co.
Martinez & Co.

PUERTO PRINCIPE.

Isaac Rodriguez & Co.
Blas Cazares.

Lorenzo Querault & Co.
Juan Gonzalez Celis.

CAIBARIEN.

Hernandez & Mata.
R. Cantera & Co.

Martinez & Co.
A. Romanach.

TRADE CONDITIONS IN NEW SOUTH WALES.

(From United States Consul Baker, Sydney, New South Wales, Australia.)

In a previous report I spoke of the reduction in the flocks of sheep in New South Wales from 60,000,000 to 20,000,000. I also mentioned the great decrease in the number of cattle and the almost total loss of the wheat crop last year throughout all Australia. The season of 1903, so far, has been favorable for all farm products, and a great yield of wheat is promised; but while this condition of affairs gives hope, it does not remove the pressure under which the people are suffering from past losses. It is wonderful that trade keeps up in Sydney as well as it does. The accumulations of the savings banks, however, show unmistakable signs of contraction. For the year ended June 30, 1902, the trust funds in this State derived from the post-office savings banks were increased £619,000 (\$3,012,363). The increase for the year ended June 30, 1903, was only £116,000 (\$564,140). In New South Wales the deposits in the banks show a contraction of £1,081,000 (\$5,260,686) during the past twelve

months. The export of gold has greatly increased from every part of Australia. The gold shipments are greater this year by £2,063,000 (\$10,039,590) than last year, and it is calculated that the whole of Australia for the year 1903 will export gold to the amount of £20,000,000 (\$97,330,000), while the amount of gold produced may not be more than £16,000,000 (\$77,864,000). The bank averages show for the June quarter a decrease of £1,053,000 (\$5,124,524), and it is thought that the shrinkage will be greater as the year advances. The financial condition of the country may also be shown by its railway traffic. In New South Wales there was a decrease in returns of £354,000 (\$1,722,741), other States suffering in proportion. The State of New South Wales, before the drought had cut off its principal resources, had undertaken some magnificent improvements, intended to benefit the country, but the cost of these improvements has largely exceeded the revenue, and it has been necessary for the State to borrow funds with which to lay even the foundation of these improvements; now that this borrowed money has been pretty well expended it is found very difficult to obtain the necessary funds for the completion of the work, and interest demanded for money has been raised from 3 per cent on State paper to 4 per cent.

ORLANDO H. BAKER, *Consul*.

SYDNEY, NEW SOUTH WALES, *August 20, 1903.*

HOP CROP OF THE WORLD FOR 1903.

(*From United States Consul Baldwin, Nuremberg, Bavaria.*)

The Kingdom of Bavaria will have nearly the same rich hop crop as last year. The same will be the case with other hop-growing districts of Germany, like Wurttemberg, Baden, Alsace-Lorraine, and Prussia.

Bohemia will have a very small crop, but both England and the United States will have better crops than last year.

The total amount of the world's hop production this year is estimated to be 1,760,000 American cwts.; the total annual consumption of hops by brewers throughout the world is held to be also 1,760,000 cwts., so that, together with the old stock from last year's crop on hand, there will be at least no deficiency, but on the contrary a surplus of about 200,000 cwts.

The prices, I am told, will this year be higher than last year, and therefore exportation from this consular district to the United States will be very small.

The following table gives a detailed statement not only of the

estimates of the hop crops of the various countries this year, but also of last year:

Country.	1903 (estimated).	1902.
Germany:	<i>Cwts.</i>	<i>Cwts.</i>
Bavaria	297,000	299,200
Wurttemberg	77,000	74,800
Baden.....	44,000	38,500
Alsace-Lorraine	71,500	71,500
Prussia.....	44,000	33,000
Total.....	533,500	517,000
Austria.....	143,000	217,800
Russia	88,000	77,000
France.....	55,000	49,500
Belgium	44,000	66,000
England	418,000	342,000
America.....	462,000	396,000
Australia and all other countries.....	16,500	16,500
Total.....	1,760,000	1,681,800

GEORGE E. BALDWIN, *Consul.*
NUREMBERG, BAVARIA, *September 1, 1903.*

CONSERVATION OF THE FORESTS OF ONTARIO.

(From United States Consul Burke, St. Thomas, Canada.)

That the government of the Province of Ontario is alive to the great importance of adopting a policy for the preservation of its forest wealth is evidenced by the following statement of E. J. Davis, provincial Crown lands commissioner, who has just returned from a trip to the Temiskaming and Temagami districts of the Province. Mr. Davis, speaking for publication, said:

The position is this: The area in the Province that has timber upon it is divided into two classes. One class is land that is good for agricultural purposes. On that class the present system of selling the timber is practically about the only system that can be pursued, because the timber must be cleared off and the land opened up for settlement. The other class of land is not suitable for agriculture, being rocky and otherwise unsuitable. On these areas the new policy will apply. The Temagami reserve was set apart in 1901 as a permanent forest reserve. Since that time we have not sold any timber there. It contains about 1,400,000 acres, or 2,200 square miles of land not good for agriculture. The proposition is that we should sell certain portions of the timber as it develops and can be placed on the market to advantage. We have decided to sell the timber by public competition, at so much a thousand feet, and the trees that are to be taken will be marked by our men. No trees below the size marked can be cut.

We are hoping to set apart reserves wherever we can in other areas in a similar way. Many old licenses will in time lapse and the limits will revert to the Crown. These will be reforested and kept as permanent forest reserves. The system is

practically a first step toward the plan of reforestizing adopted in Germany, and will involve much more stringent regulations in regard to fire ranging than have been hitherto in force.

Though there are millions of acres of forest lands in Canada as yet untouched, it becomes manifest that the Ontario government, in the adoption of the above-outlined policy, is taking an early and wise precaution against the extinction of forests in this Province.

M. J. BURKE, *Consul*.

ST. THOMAS, CANADA, *October 9, 1903.*

INDUSTRIAL PROSPERITY OF STRATFORD, ONTARIO.

(From United States Consul Seyfert, Stratford, Canada.)

Stratford, the county seat of the county of Perth, is the center of a splendid farming country. It is built on the watershed of the Ontario Peninsula, 1,200 feet above sea level, and is the highest city in the Province. It is one of the rapidly growing towns of western Ontario. During the past year the population has increased over a thousand, and would have doubled that number but for the fact that there is a great deficiency in houses of the kind wanted by the working classes. Rents have been advanced from \$3 to \$5 a month as the result of new factories and the enlargement of old ones.

A new biscuit and candy factory that will employ 300 people was built during the summer. Another factory, to manufacture manure spreaders, that employs 100 men was erected and is running day and night to keep up with orders. The Globe-Wernicke Company, an American concern, of Cincinnati, has located a factory here during the year and is doing a large business. Another company, formerly engaged in the manufacture of bicycles, has adapted its plant for the manufacture of automobiles. This is an entirely new enterprise for western Ontario and the first establishment of the kind in this city. Another company has erected a factory to manufacture rubber and knit goods and will employ a large number of men and women. In addition to these improvements, the city during the past year erected a handsome public-library building, costing \$15,000, the funds being furnished by Andrew Carnegie. A Young Men's Christian Association building, to cost \$25,000, is now in course of construction and will be a handsome addition to the many other public edifices of the city. Many private residences have also been erected during the past year.

The year has been one of great prosperity for the city in every respect. Labor was employed on full time and at good pay. Strikes

have thus far not interfered with the operation of any of the factories or works. The cost of living is a trifle more than it was a year ago, which is largely due to the increase in rents.

Of all the diversified industries established here the Grand Trunk Locomotive Works is the leading one of the city. Its monthly pay roll is nearly \$100,000, and when the contemplated enlargement of the works is completed it will be twice that amount.

The city has no street-railway system as yet, but a franchise has been granted to an American syndicate to build a road to connect some of the larger towns within a radius of 12 miles of Stratford. It is the purpose of the promoters of this trolley system to connect the towns of St. Marys, Mitchell, Shakespeare, and Tavistock—all thriving boroughs with a total population of 10,000. It will take 50 miles of trolley road to connect them with the county seat. The highways upon which the tracks will be laid are broad and level and well adapted for a model trolley roadbed.

The improvements contemplated for the city during the coming year are quite extensive. The leading streets to the country from the city have been macadamized, and fine permanent roadbeds are the result. The business streets of the city are not permanently paved, but the council proposes to put down a mile of brick the ensuing year. Experiments have been made with Ohio brick in street crossings with a satisfactory result.

The electric light and gas company of the city, which controls both systems, has been reorganized during the year and is now in the hands of American capitalists, and since the reorganization there has been a marked improvement in both services.

The water supply for the city was owned and controlled by a private company, but during the past year the ratepayers voted to purchase the rights, which was done, and the service is now in the hands of the municipal authorities.

A. G. SEYFERT, *Consul*.

STRATFORD, ONTARIO, *October 8, 1903.*

CAPE TOWN INDUSTRIAL EXHIBITION.

(From the British and South African Export Gazette of October 2, 1903.)

The Cape Town Industrial Exhibition promises to be one of the most important events in South African history. It is proposed to stimulate the general commerce of the South African colonies and to obtain for them the recognition which the projectors of the exhibition deem they deserve. Now that the war is over, prosperity and commerce are again destined to go hand in hand to rebuild what the war has wasted. The country can congratulate itself upon this most excellent effort for establishing means to make known the importance of South African markets. The resources of the country are admitted to be exhaustless, and their development

points to a steady and consistent expansion of trade such as has never before been experienced. Other nationalities, too, besides our own are participating in an appreciable degree in this general advancement, and merchants and manufacturers emulate each other in the bid for a share of the favors South Africa is in a position to bestow. The ordinary routines of trade have done much toward meeting existing demands, but the general progress is so great that exceptional facilities are by no means out of place in demonstrating superiority in the arts and industries that will be attracted to the Cape Town Industrial Exhibition it is proposed to hold in November and December, 1904, and January, 1905. In other countries the primary object of exhibitions has been to illustrate the progress made by the arts and industries in contemporary times. The object of the exhibition under notice is rather to bring to South Africa examples of arts, manufactures, and industries which will enable responsive colonists to judge of the character and utility of materials and manufactures that are best adapted to their especial needs and requirements. If the Cape Town Industrial Exhibition worthily achieves this useful purpose, as we have every reason to believe it will, its conception and existence will be more than justified, and beneficial results, in which colonist and exhibitor alike will participate, will follow in its wake.

It has been suggested by disinterested parties that the exhibitors at the St. Louis Exposition might easily secure space for showing their more important lines at the Cape Town exhibition. The fact that the goods have already been prepared for exhibition and that they will have to be carefully packed for home transportation any way may suggest to exhibitors at St. Louis the feasibility of sending them to Cape Town.

INDUSTRIAL MUSEUM IN THE CITY OF MEXICO.

(From United States Consul LeRoy, Durango, Mexico.)

Through the official organ of the State government of Durango, the Federal Government of Mexico announces the establishment at the City of Mexico of an "industrial technological museum." Samples are requested of all "who exploit or produce raw materials" in this State. This industrial museum will be under the Secretary of Fomento (colonization and industry). Its purposes and duties are thus outlined:

1. To collect samples of the mineral, vegetable, and animal raw materials which are found in the country, to be supplied by their producers or exploiters, together with all the data possible concerning their use, regardless of whether the materials can be employed in domestic or in foreign industries. These samples will be kept on exhibition permanently.
2. To place beside each special series of raw materials pictures showing the manufactures to be made therefrom, both in the domestic and foreign markets where they are consumed, and lists of the commission merchants and commercial houses which handle these manufactured products.
3. To make geographic charts of the Republic, showing, by means of conventional colors, the sections of the country where the various groups of raw materials are cultivated or produced.

4. To have on exhibition a map of the Republic, which shall always be kept up to date, and on which shall be indicated with exactitude the various transportation routes—maritime, river, etc.

5. To collect data, for the information of the public, relative to the rates of freight from the place of production to any point in the country or abroad, and also the customs duties which the raw materials pay upon importation into any country which consumes them.

6. To establish in the same quarters a "technological library," containing the most minutely specialized catalogues, with their prices, of the principal factories of all nations, and especially of the manufactories of the machinery employed in converting the raw materials produced by this country into the best finished products. This library is to be kept up to date—that is to say, pains will be taken to secure continuously the last editions of every catalogue. The classification to be adopted shall be practical and one admitting of easy consultation.

The museum is to furnish applicants, free of charge, with all the data it possesses about prices, places of production, producers, and freight on raw material, and with the data about manufacturers of machinery. Producers or manufacturers can, under certain regulations, place therein samples or catalogues for distribution. The library and services of translation of its catalogues will be free. The museum is to publish and distribute free its own catalogue of the raw materials on exhibition, giving the name of the material, name and address of the producer, place of production, quantity that can be produced, price at the place of production, cost of transportation to the nearest railway station, and the principal uses of the raw material.

The cooperation of scientific societies is invited, as is that of persons willing to contribute technical studies for publication as special bulletins. The museum will undertake the analysis or technical examination of raw materials, according to agreements reached with those desiring this service. It will not, however, undertake commissions between producer and purchaser, only putting them in touch with each other.

The plan of putting on exhibition, in connection with foreign consulates, collections of raw materials, etc., from Mexico, which has recently been inaugurated, will be continued under the direction of this museum, which will also have charge of Mexican exhibits in foreign expositions.

JAMES A. LEROY, *Consul*.

DURANGO, MEXICO, *September 22, 1903.*

SOLICITORS' FEES IN FRANCE.

(From United States Vice-Consul Piatti, Nice, France.)

Legal procedure in France requires the services of both a bar-
rister and a solicitor. A decree has just been published by which
solicitors' fees are fixed as follows:

- Emoluments of solicitors, exclusive of all expenses disbursed by them, shall be:
- 1. A "fee of advice" of \$2 for sums up to \$300 and of \$4 for sums over \$300.
 - 2. A "fee for formalities" of \$3 up to \$300, of \$6 up to \$600, and of \$8 over \$600.
 - 3. A "fee for action" proportioned to the importance of the lawsuit and fixed as follows:

	Per cent.
Amount up to \$300.....	2. 5
Above \$300 up to \$1,000.....	1. 5
Above \$1,000 up to \$2,000.....	. 5
Above \$2,000 up to \$20,000.....	. 25
Above \$20,000 up \$200,000.....	. 16
Above \$200,000.....	. 05

This law goes into effect on October 16, 1903.

ATTILIO PIATTI,
Vice-Consul.

NICE, FRANCE, September 15, 1903.

BUTTER PRODUCTION OF EUROPE.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

Within the last ten years Russia has more than doubled its
butter production. The Siberian Provinces, especially, have within
a few years largely developed their butter industry, and it is stated
that Siberia at present contains 608 dairies. The development of
this industry has been greatly aided by the facilities furnished by
the Government for the carriage of butter on the railroads and
through special steamship service to England. The Government
also runs special cars for the transportation of eggs to the seaports
for shipment abroad.

Denmark, a large producer and exporter of butter and cheese,
imports considerable quantities of cheap butter from Russia.

A Danish company has lately been organized, with a cash capital
of 2,000,000 crowns (\$536,000), for the purpose of exploiting Sibe-
rian dairy industries. It has already established branches in thirty
districts of that country.

A German journal publishes the following statistics showing the

number of cows in the principal dairying countries of Europe and the annual production of butter and cheese:

Country.	Cows.	Annual production of butter and cheese.
	<i>Number.</i>	<i>Met. tons.</i>
Russia	10,000,000	350,000
Germany.....	8,950,000	300,000
Austria.....	6,000,000	170,000
France.....	5,000,000	200,000
Italy	2,400,000	145,000
Belgium	800,000	60,000
Switzerland.....	800,000	70,000
Denmark	1,050,000	60,000
Holland.....	900,000	120,000

Italy's production of butter has trebled within the last decade.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *September 24, 1903.*

IMPORTS OF BUTTER INTO THE UNITED KINGDOM.

The United Kingdom being the principal butter market of the world, the following statement of importations compiled in the Bureau of Statistics from British official returns will prove of interest to our dairy farmers and butter exporters in connection with the foregoing report of Deputy Consul-General Hanauer:

Whence imported.	1898.		1902.	
	<i>Pounds.</i>		<i>Pounds.</i>	
Russia	20,197,296	\$4,285,566	54,890,192	\$10,687,973
Sweden.....	33,035,744	7,307,868	21,458,192	4,846,246
Norway.....	3,039,456	660,842	2,941,792	677,719
Denmark	164,083,360	35,816,618	190,805,552	45,282,009
Germany	4,617,872	1,041,655	2,954,000	707,584
Holland	30,164,288	6,469,710	44,045,232	9,606,131
Belgium	4,075,008	847,958	9,031,232	1,943,588
France.....	46,683,952	10,627,682	46,394,880	10,867,488
Italy	32,816	7,747	560	122
United States.....	7,471,744	1,388,457	6,099,296	1,230,611
Argentine Republic.....	1,649,648	347,547	7,765,632	1,710,146
Other foreign countries.....	87,248	14,258	2,016	418
Total from foreign countries.....	315,138,432	68,815,902	386,388,576	87,560,035
British East Indies.....	110,096	13,232	96,656	14,030
Australia	26,561,248	5,617,357	26,699,680	5,761,770
Canada	17,568,880	3,221,307	32,005,680	6,556,856
Other British possessions.....	46,480	10,220	1,904	447
Total from British possessions.....	44,286,704	8,862,116	58,803,920	12,333,103
Total imports.....	359,425,136	77,678,016	445,192,496	99,893,138

FAULTS OF FRENCH MANUFACTURERS AND EXPORTERS.

(From United States Consul Haynes, Rouen, France.)

Le Journal, Paris, in a recent edition, complains of what it calls the "bad commercial habits" of the French, due to certain traits of their national temperament. It asserts that too much care is given to the production of goods and too little to their selling; that the French manufacturers show too much confidence in themselves in waiting for the market to come to them—a confidence, however, which is dangerous to their interests in the present day when their competitors are so assiduously seeking customers. No fault is found with the French commercial traveler, who is "clever, honest, and wise," but his employers do not know how to take advantage of his brilliant qualities. "Home loving, like all good Frenchmen," they have accepted with resignation the change of the general conditions of life, along with lessened incomes, which, instead of trying to increase, they have allowed to diminish yearly by relying solely upon the merits of their goods to bring them customers.

That the French merchants wish to do business only upon the very best guaranties is given as another reason why they are behind in the modern commercial movement. The reports of French consuls are cited wherein attention is directed to the manner in which French conservatism is taken advantage of by the Germans, who, instead of being "prudent," take many chances to secure trade. This aggressiveness, though sometimes resulting in loss, the editorial says, is made good by imitating marks, brands, and goods.

Le Journal deplores the fact that French commerce is slowly losing its markets, not only in the basin of the Mediterranean, where it once was virtually without competitors, but in Asia and the New World. It adds:

We still have sufficient advantages to hold our own. The French language is much more widely spoken in the Levant than any other, and the propaganda of the French alliance favors both our traditions and our interests.

The article ends by calling attention to the example of the Americans, who have suggested a floating exposition to exhibit their merchandise in Pacific ports; and states that M. Louis Olivier, secretary of the Revue Générale des Sciences, Paris, has taken advantage of this idea by equipping a steamer as a floating museum. The vessel is to leave Marseilles October 8 next. This floating exhibition, however, is not so much for the purpose of selling goods

as for illustrating along the Mediterranean the kinds, qualities, and prices of French manufactures. It will stop at Constantinople, Broussa, Saloniki, Smyrna, Piræus, and Athens, making each of these places a center of commercial exploitation and study,* M. Olivier having arranged for excursions to the great interior markets, of which these ports are the natural outlets.

THORNWELL HAYNES, *Consul*.

ROUEN, FRANCE, *September 21, 1903.*

AMAZON RUBBER TRADE.

(*From United States Consul Kenneday, Para, Brazil.*)

I have reported this fact so often that it may seem stale, though it is of paramount interest here: Unnumbered rubber gatherers are still going up the Amazon River. During the last seven days, as I am reliably informed, 5,000 men went up to the rubber fields. There are agents of the aviadores "planted" all down the coast as far as Ceara to secure suitable men for this work, and in this harbor there are at this writing ten small river steamers loaded with laborers on their way to the extreme upper river rubber districts.

The inclosed note from Mr. J. A. Mendes, manager of A. H. Alden's house here, which is one of the largest exporting houses in northern Brazil, concerning the general trade conditions should be of interest to the rubber industry of the United States.

K. K. KENNEDAY, *Consul*.

PARA, BRAZIL, *September 23, 1903.*

Mr. Mendes to Consul Kenneday.

It now looks as though the Amazon Valley is to enjoy a period of prosperity after three years of hard times following the depression of 1900. A strong effort is being made to steady exchange around 12. Once this is accomplished, the cost of commodities which Brazil imports will be materially lessened. The higher prices of our own products have also aided largely to produce the present national prosperity, especially in the profitable supplying of the rubber districts.

When you consider that the crop of this coming season of 1903-4 will be, say, 33,000 tons, which will bring to this market about \$75,000,000, you will realize that the losses on rubber during the recent hard times will be easily made up with a large crop of dollar rubber. A substantial balance will remain to trade for cash during the coming season.

There is now every probability of a crop as follows: From the upper river, 20,000 tons; from the islands, 10,000 tons; of caucho, 4,000 tons.

*See report from United States Consul Ridgely, Nantes, France, "French exporters' cruise to the Levant," in DAILY CONSULAR REPORTS No. 1770 (October 9, 1903).

The recent big rise in rubber prices, to-day quoted at \$1.07 to \$1.10 per pound, shows that the demand for Para rubber is not falling off, but is, on the contrary, very brisk and growing stronger. A few months ago the price was about 80 cents.

J. A. MENDES.

PARA, BRAZIL, *September 23, 1903.*

FUTURE OF MEXICO'S INDUSTRIES.

The Mexican Journal of Commerce, in its issue of October 1, 1903, says:

Prof. A. E. Sayus, of Paris, representing the French Board of Trade, the French Minister of Commerce, the Musee Social of France, and a number of leading European journals, has been investigating the monetary, mining, and industrial features of Mexico. After a more than ordinary study, made in an impartial manner, Professor Sayus has expressed the utmost confidence in Mexico's future. He says:

"After the monetary change now under way is realized there will come to Mexico a stream of capital from the United States, England, and France, and one of the greatest booms in the history of the world will result. The United States will lead the movement. France and England will follow in the footsteps of the United States, but their investments will not amount to anything like those of the United States. Still they will be enormous. Germany will not make any investment for some years. This is a country which is especially noted for its mines and plantations. The inexperience of the Germans in these matters is such as to discourage them from investing here. The Americans have the mines practically to themselves. The railroads which they control make the Americans the industrial dictators of Mexico. As to railroads, the United States is without competition. Germany can only hope to make profitable investments in Mexico when the country becomes ready for farmers. This will be when the Americans have all the mineral resources in an advanced stage of development. The investments of France and England will be made in the mines principally. Both these countries have had interests in the mines of Mexico a long time, and their experience is such that they can compete with the United States to a certain degree.

"I was very agreeably surprised to find so much industrial activity in the southern States. I visited Orizaba and San Ildefonso and examined the many factories located in those places. Nearly all the factories of Orizaba and San Ildefonso are owned by French and Swiss capitalists, the French being in the majority. At San Ildefonso I visited the woolen factory which is under the superintendence of M. Hupin. From a technical point of view the factory is excellent. The factory is not extraordinary, but it would be considered first class in any part of Europe. The very best machines from Europe and the United States are installed in this factory, and some of the rarest goods are turned out. The consumption of woolen goods in Mexico is not great, therefore this enterprise is not as profitable as it deserves to be. It is difficult for the company to increase the demand for woolen goods among Mexican workingmen and for this reason the factory can not make certain classes of cloth to advantage. At the San Ildefonso factory the motive power is electricity, and the electric plant is one of the finest in Mexico.

"At Rio Blanco, in the State of Orizaba, the French companies have three or four industrial plants and give employment to between 2,500 and 3,000 persons. In the largest of the factories—a cotton mill—over 1,700 persons are employed. The machinery is of the most modern design. So far the chief fault found with the machinery has been its perfection. The Mexican operatives regard the machines

as invaders upon their callings and object very much to them because of the automatic contrivances which do away with labor to a great extent. The machines at the Rio Blanco plant are the best I have seen for a long time. Those for making prints are of Alsatian make and are perfect.

"The same company which operates the cotton factories at Orizaba also has a large brewery at Rio Blanco. All the machinery is of American manufacture but is operated by Frenchmen. The only article used in the brewery not from the United States is hops, which is procured from Germany. The product of the brewery is of good quality.

"The French company which controls so many factories in the State of Orizaba is known as the Industrial Association of Mexico. It is managed by a committee.

"There is no trouble over wages at the factories. The wages range from 50 cents per day for ordinary to \$1.50 for skilled laborers. Few women are employed; work that is done in the United States, France, and Germany by women is done in Orizaba by men.

"In the southern States I found sugar plantations doing well. Modern machinery is rapidly being installed and the country is progressing in consequence."

IRRIGATION SYSTEMS FLOODED IN MEXICO.

(From United States Consul LeRoy, Durango, Mexico.)

In consequence of floods along the Nazas River in the State of Durango, Mexico, September 28 to 30, the irrigation systems along its lower course and in the State of Coahuila, in the so-called "Laguna district," were damaged to the extent of about \$250,000, according to the report of Consular Agent G. C. Carothers at Torreon. This is the most important cotton-raising district of Mexico, and the first reports were that the expected large crop for this year had been totally ruined. Although it was damaged considerably, it now appears that interested parties greatly magnified the loss in this line. The principal losses are to the dams, irrigation ditches, etc. This district has several completely equipped plantations, with very fair and modern irrigation systems. The floods on the lower Nazas, which succeeded a week's heavy rainfall in the mountains, carried away bridges, dams, houses, etc., and, had it not been for the giving way of the embankments of electric and steam railroads, the flourishing towns of Lerdo and Gomez Palacio would have been nearly destroyed on September 30. Of course, irrigation ditches were flooded and to a large extent destroyed.

This is the heaviest flood that has visited this district for nearly fifteen years. It follows several dry seasons, and, though the loss is considerable, planters are congratulating themselves on the fact that so thorough a flooding of the lowlands insures big crops for next season—possibly for the next two seasons. In expectation of such a crop, preparations are already being made to restore the damaged ditches, dams, etc., on a larger scale and in better shape

than before. As stated, agricultural methods in this district are already relatively very progressive. Here, it would seem, is an opportunity for promoters of improved irrigation systems. Some of the plantations flooded were, if not antiquated, at least much behind the times in their methods. They might at this time be induced to adopt more advanced machinery and methods of irrigating and handling their cotton crop.

The damage elsewhere throughout the State was considerable to bridges, highways, etc., principally, as agriculture is not of much importance in the higher portions of the State. All the rivers were up as they have not been in years. A threatened bridge and damaged roadbed interrupted rail communication between Torreon and Durango, on the main line of the Mexican International Railroad, for two days. Two bridges and some mileage of track on the International branch from Durango to Tepehuanes were carried away, and communication can not be fully restored before November 1. In various portions of the State, as well as in the Laguna district, some human lives were lost, and considerable live stock was swept away in many places.

JAMES A. LEROY, *Consul.*

DURANGO, MEXICO, *October 16, 1903.*

COFFEE INDUSTRY IN PORTO RICO.

El Cafetal, a journal published in Spanish in New York City in the interests of the coffee trade, contains an article in its August issue on coffee growing in Porto Rico, from which the following notes are condensed:

The coffee crop is the most valuable one in Porto Rico, the exports exceeding all other products in value.

Coffee is cultivated on the island in a very primitive manner, and consists mainly in transplanting into new ground seedlings grown from berries that have fallen to the ground in the old plantations. It is impossible in this way to exercise any selection of seeds. No uniformity is used in making the plantations. Usually two trees are set out together to make allowance for one dying. If both live they are permitted to grow, with the result that neither properly develops. While the trees are small, the soil is stirred up occasionally with a machete and the weeds are cut down with the same implement. No attempt has been made to preserve the shape of the tree by pruning or to protect it from the attacks of insects. The trees when set out are protected with underbrush in such a manner as to make them very delicate, thereby requiring five to seven years to fruit. As soon as they commence to bear the seedlings cover the

ground underneath frequently to such an extent as to prevent passage. The fruit is difficult to gather, since the greater part of it grows on the higher branches.

The principal coffee districts are those of Utuado, Las Marias, Maricao, Lares, Ciales, Adjuntas, Mayagüez, San Sebastian, Ponce, and Yauco, in the order mentioned, producing 60 per cent of all the coffee grown on the island.

Soil conditions, even on the same plantation, are very variable. The soil requirements of the coffee plant have not been well understood, as is shown by the fact that plantations have been put out in soil which was not at all adapted for its growth. A heavy soil is best suited for coffee, particularly if chalky or clayey, and it should retain its heavy character to the depth of 3 feet or more.

It is said that the coffee tree reaches its maximum of production in about twelve years and should continue in full bearing for fifty years, though some trees are known to be as old as eighty-two years.

The cyclone of August 8, 1899, caused great havoc to the coffee plantations; the terrific wind broke the branches of the trees and the floods of water washed away great quantities of organic matter from the soil. In some places large tracts were swept clean of all vegetation.

The present average yield of coffee in Porto Rico is only 200 pounds per acre, whereas with proper cultural methods there is no doubt but that the yield could be increased to 1,000 pounds per acre. At 10 cents per pound this would place the coffee industry of Porto Rico on a paying basis.

COFFEE INDUSTRY OF COLOMBIA.

(From United States Consul-General Snyder, Bogotá, Colombia.)

Coffee-producing districts.—The principal districts for the cultivation of coffee are the Department of Cundinamarca as a whole (which produces the famous Bogotá coffee), the Department of Santander, the districts around Ocaña, Cucuta, Bucaramanga, and the Tolima. The lowlands of the Tolima, on either side of the Magdalena River, form the grazing lands, while east and west of these, at varying distances, rise the cordilleras of the Andes, in the small valleys of which the coffee is grown.

Qualities of coffee produced.—There are three classes of coffee produced in the Republic. First, that which is dried in the sun in the cherry and afterwards cleaned; this is known as “café trillado,” and is the lowest-priced coffee. Second, that which is prepared by washing the cherry or pulp from the bean, which is then dried and cleaned by machinery; this grade is called “café lavado,” and

brings a good price. Third, that from which the pulp is washed and the bean exported, after being dried in the husk; this grade is known as "café en pergamino," and is the highest-priced coffee.

Temperature and soil.—The temperature may vary between 59° and 77° F., but the quality of the coffee does not depend so much upon the temperature of the district as upon the soil and cultivation. The bean is larger in the hotter climates, but with properly planted shade trees and satisfactory pruning and suitable land any quality of coffee can be produced. In the colder climates the bean is smaller, but the plant requires less care; planters are not as careful in pruning, and quality is generally sacrificed for quantity.

Annual yield.—A tree from 4 to 8 years old will yield, on small and well-kept plantations, about 1 pound annually, but on the large plantations the yield is usually about half that amount.

Coffee exports.—It is stated that of the annual crop but about 25,000 bags are retained for home consumption. The best grades are always exported and the damaged beans are reserved by the planters for sale locally. By damaged beans is meant those that have been torn by the machinery in cleaning or otherwise damaged in the handling. The unmarketable beans float to the top during the process of washing and are skimmed off and used as fertilizer on the plantations.

Price.—With Brazilian coffee at 6 cents a pound, as a standard, the average prices of Colombian coffee run from 7 cents for Ocaña to 11 cent for Tolima. For some time, owing to the revolution, the exportation of coffee has been almost at a standstill, and on this account Colombian coffee will undoubtedly lose favor, as some of the coffee now being exported is 3 years old.

Marketing the crop.—It costs about 4 cents per pound to put the coffee in New York, including commissions, etc., and as the cost of production on the estates can not be reduced to less than 4 cents the general opinion here is that, with the exception of a few estates on the Magdalena River, coffee growing in Colombia is not a paying business with the rate below 8 cents per pound in New York. The high cost of putting the coffee in New York is chiefly owing to the poor means of transport to the coast.

Credits.—Coffee growers, before the war, in order to enable them to harvest their crop, were given large credits, but most of them, through the fall in the price of coffee and carelessness in the working of their plantations, fell far behind in payments. The result is that foreign houses are limiting credits to the amount necessary to secure facilities for transportating the coffee which is prepared for export.

BOGOTÁ, COLOMBIA, August 21, 1903.

ALBAN G. SNYDER,
Consul-General.

SUGAR INDUSTRY IN SIAM.

(From United States Consul-General Nash, Bangkok, Siam.)

The cultivation of sugar cane in Siam and the manufacture of sugar are industries which are capable of being increased greatly with the introduction of better methods in the production of the cane and modern machinery for the manufacture of the sugar. The mode of cultivation and manufacture which prevails at present is as follows: Cane is planted during the dry season (December to June) to make cuttings for planting in the beginning of the rainy season—about the end of June. These sections of cane are then planted (one or two together), the ground being kept well weeded and thoroughly hoed three or four times during growth. The ripe cane is crushed and the juice boiled in an iron pot, with the addition of a small quantity of lime, which precipitates the impurities and enables the clear liquid to be drawn off through a pipe into a second pot, where it is again boiled until it becomes a pale, yellow color. This boiling operation is repeated successively in three more pots, when the sirup has reached the consistency and color of molasses. This molasses is then ladled into small earthen pots, provided with apertures (like flower pots) closed by plugs, and there allowed to cool over night. When cold the pots are placed over other pots, the plugs removed, and the molasses allowed to drain off, leaving a coarse yellow sugar.

The process of refining consists in pressing down in the pots the coarse sugar thus produced, covering it with prepared earth, and allowing it to stand for a fortnight. Upon removing the earth, a certain part of the sugar is found to be quite white. This layer is then removed, exposing the yellow sugar underneath, when the process is repeated until all the sugar is refined. The molasses which drains into the lower pots in the course of these operations is reboiled and subjected to the same processes as before.

The quantity of sugar manufactured is far from being sufficient for home consumption, as shown by the following table of imports:

Year.	Refined sugar.	Raw sugar.
1899	\$331,392	\$68,966
1900	415,560	46,920
1901	358,609	32,791
1902	908,641	18,924

It will be observed from these statistics that while the imports of refined sugar are increasing enormously, the unrefined product shows a marked decrease. This can be accounted for in either of two ways: The Siamese are learning to prefer refined sugar, or the production of the unrefined variety is increasing greatly. There are no statistics showing the amount of home-grown cane, so it is not certain what causes this decrease; although there is no doubt that there is a certain increase in the home production, I am of the opinion that the first hypothesis is the more probable.

PAUL NASH, *Consul-General.*

BANGKOK, SIAM, *September 10, 1903.*

**MANUFACTURE OF FIREARMS AND GUN
BARRELS IN LIEGE.**

(From United States Consul McNally, Liege, Belgium.)

The manufacture of firearms and gun barrels in Liege has steadily increased since 1880, and the exports thereof have increased in like manner.

The exports to all countries during recent years were as follows:

	Francs.
1898.....	15, 000, 000= \$2, 895, 000
1899.....	16, 500, 000= 3, 184, 500
1900.....	18, 000, 000= 3, 474, 000
1901.....	19, 000, 000= 3, 667, 000

The United States is one of the principal markets for the fire-arms product of Liege, especially for guns costing under 25 francs (\$4.82). Grades beyond that price being subject to a high duty in the United States, a large exportation of the better qualities is prevented; nevertheless, the demand from the United States for the higher grade of guns is greater at present than at any previous time.

I am reliably informed that certain manufacturers turn out a large quantity of guns having imitation Damascus barrels attached. This, however, can not in any way injure the reputation of the fire-arms manufacturers, most of whom are thoroughly reliable in the quality of their products.

In the year 1901 the export of firearms and gun barrels to the United States amounted to about 2,800,000 francs (\$540,400) and in 1902 to over 3,000,000 francs (\$579,000), the proportion of gun barrels and firearms being about equal.

In the last ten years the production of Damascus and steel barrels has increased, the annual production being about 500,000, of which

about 100,000 single and 160,000 double barrels were sent to the United States.

The Damascus gun barrel is made principally at Nessonvaux, 8 miles from Liege, but in this consular district.

Manufacturers report that many American houses buying from Liege factories do so through agents, and say that it would be more advantageous to importers to deal directly.

JAMES C. McNALLY, *Consul.*

LIEGE, BELGIUM, *October 14, 1903.*

NOTES.

Openings for American Rubber Shoes in France.—It seems to me that skeleton gum shoes and rubber overshoes would meet with a ready sale anywhere in northern and western France, where the climate is such as to compel the almost constant use of foot wear of that character, and I think it would be well worth the while of any of our manufacturers in this line to send their representatives to Nantes.—*Benj. H. Ridgely, Nantes, France, October 1, 1903.*

The Shoe Industry in Germany.—Das Handels Museum, an Austrian trade paper, in its issue of October 15, 1903, says:

Attempts are now being made to form a trust of the German leather manufacturers. As a preliminary step a central office will be located in Berlin, and the members of the trust will be assessed about 75 cents per employee for its maintenance. Statistics show that German exports of shoes have fallen off and that imports of American shoes are rapidly increasing. Americans are opening stores in all the German cities. The poor condition of business this summer caused many factories to shorten their working time.

American Leather and Shoes in Belgium.—United States Consul J. C. McNally, of Liege, Belgium, under date of October 14, 1903, notes the importation of considerable quantities of American leather into Belgium, and says there is a constant demand for American shoes, concerning which he reports:

I find it impossible to secure a pair of fine American shoes either in Brussels or Liege. I would think that in such large cities an American shoe house would do a good business, as shoes of United States manufacture are acknowledged to be superior to all others.

Peg-Making Machines.—Under date of October 17, 1903, United States Consul F. D. Chester, of Budapest, Hungary, reports that the Commercial Museum in that city desires a list of American manufacturers and exporters of wooden-peg-making machines. Such manufacturers should communicate with Consul Chester directly.

American vs. German Corsets.—In his annual report, dated October 12, 1903, United States Consul Hugo Muench, Plauen, Germany, says:

Large quantities of corsets are manufactured at Oelsnitz, in the

Plauen district, but no part of the product is exported to the United States; nor is this surprising, since German corsets can not compare in style, durability, or price with those of American make. On the contrary, there is every reason to believe that this country presents an inviting market for American corsets.

American Loom Shuttles in France.—I am asked by Mr. E. Levillain, 4bis. Rue de Florence, Rouen, if there is any important manufacturer of shuttles for looms in the United States who would like to be represented in Normandy. Mr. Levillain assures me he can furnish the very best references and that he visits the most important houses of this district, as well as those of Roubaix, Paris, Lille, and other cities. Communications may be addressed direct to him.—*Thornwell Haynes, Consul, Rouen, France, August 15, 1903.*

American Fruit in Saxony.—Under date of October 12, 1903, United States Consul Hugo Muench, of Plauen, Germany, states that the big red American apple has long been a favorite with the people even in that remote region, while the fine California dried fruit, now for sale in every grocery, is indispensable to the average household. The consul adds that the laws and regulations which tend to impede the free importation of these fruit products find little favor with the masses.

American Wood in Germany.—*Kölnische Zeitung*, a German commercial journal, says that imports of wood into Germany from the United States have more than trebled since 1880, amounting in 1902 to more than \$5,850,000. It consisted mostly of pitch pine. This wood is more resistant to the weather and costs much less than oak, which averages \$3.47 per 35.3 cubic feet, while pitch pine costs only \$1.66 for the same amount. Owing to its utility and cheapness the pine is handled in the most remote parts of Germany. It is used for making doors, windows, floors, etc., while oak is used in the manufacture of the finer grades of furniture.

American Machinery in Canada.—I can not secure from the customs officials the exact value or character of the goods imported into this (Moncton, New Brunswick) district, but find the majority of merchants carrying more or less of our goods, some of which, however, are not imported direct, but are purchased from wholesale houses at Montreal and Toronto. Among the goods imported direct

I may mention boots and shoes, raw cotton, hardware for plumbing, millinery, cotton and rubber clothing, hats and caps, agricultural implements, oil-boring and mining machinery, etc. During the first five months of the present year the imports into Canada of this kind of machinery were valued at \$478,303 (\$451,391 nondutiable and \$26,904 dutiable), of which the imports from the United States amounted to \$474,109 (free, \$447,411; dutiable, \$26,698), leaving for all other countries \$2,343. The preferential tariff, it would seem, is not much of a stimulant to British trade in mining machinery, the imports therefrom amounting to only \$1,851.—*Gustave Beutelspacher, Consul, Moncton, Canada, September 19, 1903.*

Warning to Grain Exporters.—Under date of Frankfort, Germany, October 19, 1903, United States Deputy Consul-General S. W. Hanauer transmits the following:

European trade papers, in commenting upon the complaints brought against the defective condition (owing to dampness) of grain received from the United States, add the following warning, which it will be well for our people to heed:

The present situation shows the enormous grain-exporting capacity of the southeastern countries of Europe when they have good crops. This ought to bring the conviction to the "Yankees" that their grain supplies are not at all times so indispensable for European needs as they seem to think, and the knowledge of this fact may cause them to earnestly try to abolish the abuses which have led to these complaints.

American Wheat Inspection.—There is again complaint at this port with respect to the carelessness of American inspectors, and local millers are hardly in a mood to receive American propositions. I have detailed information respecting one lot of 40,000 tons of red winter No. 2 shipped from one of our Southern ports, receipt of which was refused by the buyers on arrival at Marseilles because the grain did not conform to the certified description given by the inspecting authorities at the port of departure. At auction sale this same wheat brought some 3 cents less than the price at which it had been purchased, and the case is now in the local courts. The principle involved in this matter is the same as that frequently discussed in my reports. European buyers find our American inspection plan admirable in theory but unsatisfactory in practice, for the reason that no guaranty whatever accompanies the certificate. No United States official is authorized to fix crop standards, and inspectors have varying ideas respecting an undetermined standard by which they undertake to grade grain coming before them.—*Robert P. Skinner, Consul, Marseilles, September 10, 1903.*

Trade Opportunities in Peru.—The sewerage system of the city of Callao, Peru, is to be extended and will require a large supply of drainage pipes. Government buildings are to be erected in Lima, the Peruvian capital. This will cause a demand for structural iron. The city authorities are also considering the purchase of furnaces for the burning of garbage.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 6, 1903.*

Cider and Jam in England.—During the past two or three years there has been a great revival of the cider trade. Cider is now being recommended by doctors for rheumatism and gout, and it has become quite a popular drink. The cider of England is usually very good, and is attractively put up. There is no reason why the United States should not get a good share of this trade. It is said that much of the cider for this season's consumption will be made from Canadian apples; in some cases, the apples being cut up and dried in Canada and sent to Devonshire and Herefordshire and submitted to a process to produce "home-made" cider. The jam trade in England is suffering from the increased price of sugar and the failure of the English fruit crop. Jam pulp is being sent from Canada to be put up by local manufacturers, and a large trade in French and German jams is expected.—*James Boyle, Consul, Liverpool, England, October 6, 1903.*

New Steamship for the Holland-America Line.—The directors of the Holland-America Line, of this city, inform me that they have ordered the construction of a new steamer for their line to ply between Rotterdam and New York. The new steamer, which is to be the largest of the company's fleet, is being built by Harlan & Wolf, Belfast, Ireland. It is to be of the following dimensions: Length, 600 feet; width, 68 feet; hold, 48 feet. It will be of 17,000 tonnage and have a speed of 17 knots an hour. The new liner is calculated to accommodate 450 first-class, 250 second-class, and 1,250 steerage passengers.—*S. Listoe, Consul, Rotterdam, Netherlands, October 31, 1903.*

Scarcity of Corn in Yucatan.—The governor of Yucatan has petitioned the Congress of the Republic for free entry of corn into that State for the term of one year. The President of the Republic recommended that the importation of corn into Yucatan be free of duty for the term of six months, commencing with January 1, 1904. It is believed that Congress will approve the President's recommendation, though no action has as yet been taken by that body. On

June 8, 1903, the Department was informed of the anticipated failure of the Yucatan corn crop, and my report thereon was printed in *ADVANCE SHEETS* No. 1687 (July 2, 1903).—*Wm. W. Canada, Consul, Veracruz, Mexico, October 15, 1903.*

Opportunity for American Investment.—United States Consul Neal McMillan, of Port Sarnia, Ontario, under date of October 7, 1903, says:

This country is not traversed by electric roads (trolleys) to the same extent as is the United States. An excellent opportunity, in my opinion, presents itself for some company to build a road from Port Sarnia to Beaches, on Lake Huron; from Beaches to Petrolia, an inland town of some 10,000 inhabitants; and thence back to Port Sarnia, passing through several villages and the best farming country in Canada. No grading is necessary and there are no streams to bridge. Such a line would be a paying investment.

Opportunities for Contractors and Capitalists in Spain.—United States Vice-Consul Danziger, Madrid, Spain, under date of September 24, 1903, reports an interview with a prominent Spanish official, who suggested the possibilities of the profitable investment of American capital and opportunities for American contractors in Spain. The first proposition was for the building of a factory for the manufacture of agricultural implements, the Government proposing to encourage such an enterprise by guaranteeing large orders for its products and the granting of many privileges to the company or individual operating the works. This proposition is now being investigated by Philadelphia parties. To contractors it was suggested that the comprehensive plans for the improvement of the city of Madrid offered opportunities. These plans involve the remodeling of the palace territory and adjacent sections of the city and the expenditure of vast sums of money. The projects have been approved by the Cortes and King, and contractors of all countries are invited to bid for the work. It is also proposed to install throughout many sections of the city a modern sewer system, for which bids are invited from all. There is at present much interest being shown in the development of the water resources of the Kingdom, with a view to their use in irrigation and for power purposes, and many opportunities offered, it was suggested, for the profitable investment of capital in the projects which are being exploited and concerning which information would gladly be furnished, where possible, to all inquirers.

Opening for American Steel in Italy.—The Italian Navy Department has announced its intention of purchasing navy supplies, armor plates in particular, from firms in foreign countries if the Italian steel manufacturers' combination—a kind of trust—attempts to raise the prices of such materials. American steel and iron manufacturers should pay careful attention to the Italian markets, as those of Germany are doing. The quantities of steel and iron which Italy proposes to use in the immediate future will, perhaps, be more than the home industry can supply and will, therefore, necessitate large orders being awarded to foreign contractors.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, October 14, 1903.*

American and Canadian Cheese in England.—The importations of American cheese continue to decrease. Canada has more than ever become the principal source of supply of cheese for the English market, and on the average the quality is considered better than that put up in the United States, and at present the price has been rather lower.—*James Boyle, Consul, Liverpool, England, October 6, 1903.*

Advance in Brazil-United States Freight Rates.—The united steamship companies which control the carrying trade between the United States and Brazil—the Lamport & Holt Line, the Prince Line, the Robert M. Sloman Line, and the Chargeurs Reunis—have agreed to raise their rates on coffee from Santos and Rio de Janeiro from 30 cents and 5 per cent primage per bag of 133 pounds to 35 cents and 5 per cent. This rate will go into force in October, but as the cargoes for the steamships *Byron, Catania, Bellarden,* and *Soldier Prince* have already been in large part purchased, these steamers, leaving in the early part of October, have been excepted from this tariff and will carry their cargoes at the old rate.—*Eugene Seeger, Consul-General, Rio de Janeiro, Brazil, September 25, 1903.*

Americans and English in Southern Brazil.—Export, a German publication, organ of the Central Commercial and Geographical Union, in its issue of October 8, 1903, says:

The Americans and the English are both endeavoring to exploit Brazil and all of South America commercially and industrially. The United States is seeking fields for her products, and already there is a demand for her agricultural machinery and other manufactures. A direct steamship service has been inaugurated between the United States and the Rio Grande do Sul, with monthly sailings. American promoters have already secured by purchase a concession for building a road in Santa

Catharina, while the concession for the Torres-Porto Alegre line is still under discussion by the Government. The Americans carry on their negotiations through agents in order to secure as many favors as possible before they disclose their plans. The English, also, are investing capital in Brazil; an example of this is the Brazilian Cold Storage and Development Company, which does a business in exporting meat.

Plauen Woolen Goods for the United States.—A large number of factories for the production of woolen dress goods, cloths, zibelines, shawls, flannels, and other similar goods are located in the district of Plauen, and while some of their product still reaches the United States the declining tendency in the export of these goods has never been checked and it is not likely that at our present rates of tariff the manufacturers here will ever again be able to largely compete with those in the United States, except it be in certain qualities of high-grade ladies' cloth; though some manufacturers express the hope that by intelligently adapting their goods to the American taste they may be able to regain some of their lost trade in henrietta cloths and shawls.—*Hugo Muench, Consul, Plauen, Germany, October 12, 1903.*

Bank Wanted in Honduras.—An excellent opportunity exists for the establishment in Tegucigalpa of a bank run on a fair business basis. In the quarter ended December 31, 1902, the receipts from exchange amounted to 1,937 pesos (\$743); from interest and discounts, to 42,364 pesos (\$16,268); from commissions on various deals, to 2,296 pesos (\$882)—making a total of 46,597 pesos (\$17,893). The disbursements during the same quarter were to the amount of 12,644 pesos (\$4,855), leaving a net profit to the bank of 33,953 pesos (\$13,038) in three months. Few towns of 12,000 inhabitants in the United States can show a better balance for three months' business. Interest on loans is calculated at 2 per cent per month, the interest compounding from month to month.—*Alfred K. Moe, Consul, Tegucigalpa, Honduras, October 14, 1903.*

Agricultural-Machinery Catalogues Wanted in Paraguay.—Considerable interest is manifested in American agricultural implements by the Agricultural College of this Republic. This is the only school of agriculture in the country and is supported entirely by the Government. It has quite a number of students who make agriculture a study scientifically and practically. The director of the institution is Moises S. Bertoni. I had a conversation with this gentleman, in which he expressed a desire to have the manufacturers of agricultural implements, such as plows and machinery

of different classes, send him catalogues, etc. He said he would be glad to exchange correspondence on these matters, which are of such great importance to Paraguay at this moment. He further states that a great many plows which come to this country are not adapted for plowing the peculiar soil of Paraguay, and in consequence make trade unfavorable in the districts where they have found their way. If suitable plows are sent to the agricultural districts they will sell readily. If the manufacturers will correspond with Dr. Bertoni, director de la Escuela National de Agricultura, Asuncion, Paraguay, he will be pleased to give them some idea as to the articles best adapted to this country. Dr. Bertoni states that, owing to the scarcity of labor, Paraguay will be forced to buy largely of agricultural machinery. He is at the head of the National Association of Agriculturalists.—*John N. Ruffin, Consul, Asuncion, Paraguay, September 8, 1903.*

Norwegian Emigration to the United States.—During the year 1902 the emigrants from Norway to the United States numbered 27,000 and 1903 promises still larger figures. The reasons for the great increase in emigration during the last few years are to be found in scarcity of work, poor prospects for the future, high taxation, and information received from friends in the United States of the satisfactory conditions found there. Large sums of money are sent from Norwegians in the United States to their relatives here; the amount in 1902 has been estimated at no less than \$1,000,000.—*Henry Bordewich, Consul-General, Christiania, Norway, October 10, 1903.*

Belgian Glassware Exports to the United States.—United States Consul J. C. McNally, of Liege, Belgium, under date of October 14, 1903, reports that the exports of glass and table ware from Liege to the United States during the fiscal year ended June 30, 1902, were valued at \$167,756, and for the six months ended September 30, 1903, the exportations to the United States amounted to \$114,181. In forwarding his report Consul McNally says:

I am unable to get any definite information as to the production of cut glass and table ware from the managers of the large manufactory of these articles, Société Anonyme des Cristalleries du Val-St. Lambert. While the other manufacturers in Liege have shown a willingness to give information concerning their output and exports, the Société Anonyme has refused to give any information whatever. This apparent secrecy is evidently through fear of some competition or other opposition to their business, particularly in the United States.

Paris Automobile, Bicycle, and Sporting-Goods Exposition.—From December 10 to 25, 1903, an international exposition of automobiles, bicycles, and sporting goods will be held at Paris, France. Foreign exhibits will be allowed to enter without payment of duty or detention by the customs authorities.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 15, 1903.*

British Pig-Iron Shipments.—The Weekly Market Report, showing the shipments of pig iron from Middleborough (coastwise and foreign), gives the exports to America for the nine months ended September 30, 1903, at 76,460 tons, against 103,878 tons for the same months of the preceding year, 3,500 tons for 1901, and nothing for 1899 and 1900. The total exports to foreign and coastwise ports during the nine months ended September 30, 1903, was: Foreign, 396,581 tons; coastwise shipments, 522,696 tons; total for the nine months, 919,277 tons. In transmitting the Weekly Market Report, United States Consul-General Evans, London, calls attention to the fact that there were exported from Middleborough to America in September, 1902, 29,196 tons of pig iron, while there were no shipments in September, 1903. The shipments for the nine months of 1903, in periods of three months, were as follows: January–March, 51,160 tons; April–June, 23,800 tons; July–September, 1,500 tons—showing a steady decrease as the year advanced.

Depression in English Shipbuilding.—Engineering, a London trade journal, in its issue for October 9, 1903, gives the following figures, taken from the current issue of Lloyd's Register, of the tonnage of vessels under construction in British shipyards on October 1, 1901, 1902, and 1903:

Vessels.	1901.	1902.	1903.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Merchant ships.....	1,414,120	1,000,714	906,608
British war ships.....	353,670	275,230	299,470
Foreign war ships.....	21,375	27,972	28,100

The figures show a decrease, compared with last year, of 69,738 tons, equal to $5\frac{1}{2}$ per cent, and on the figures of two years ago, when the highest point was reached, of 554,987 tons, equal to about 31 per cent.

Wireless Telegraphy between France and England.—The introduction of the first regular wireless telegraph service in France is due to the initiative of the railway company of the Ouest, which, together with the Brighton Company of England, will install stations at Dieppe and Newhaven. The system of Octave Rochefort will be used. The installation of the service has been confided to the Mors Society of Paris, well known for its electrical appliances and automobiles.—*Thornwell Haynes, Consul, Rouen, France, October 14, 1903.*

Nitrate Deposits of the Sahara.—The nitrate of soda industry, says Commercial Intelligence, is of enormous importance to Chile. There are nearly 100 works, producing about 1,400,000 metric tons of 2,204 pounds each annually, the estimated value of which is \$54,504,800 in Europe. Can the African deposits described by travelers be compared with those of Chile? All the question of future prosperity lies here. If they exist, they are workable in spite of the distance from the coast, because the exit duty of \$11.52 per ton exacted by Chile would compensate for heavier transport tariffs. Numbers of experts, according to Mr. E. Gauthier, are convinced that there are deposits, more extensive than those of South America, extending over all the west of the Sahara from Adar to the coast of the Atlantic and south of Morocco. This, he considers, is an explanation of M. Jacques Lebaudy's conduct, who is regarded as a business man.

Steel Trust for Germany.—A meeting was held on October 29 at Düsseldorf of parties interested in the production of steel in the Empire to effect a general iron and steel trust for Germany. A commission was appointed at that meeting intrusted with the details of organization. At a meeting to take place on the 7th of November the proposals of the commission will be considered and arrangements made for a general meeting to take place November 23. There is every prospect that the German steel trust will then become a reality.—*J. H. Worman, Consul-General, Munich, Germany, November 2, 1903.*

German Sample Warerooms in Foreign Countries.—Under date of October 10, 1903, United States Deputy Consul-General S. W. Hanauer, of Frankfort, Germany, reports that the Industrial Exchange of the city of Mannheim, composed of the leading manufacturers, merchants, shippers, and exporters of that city and vicinity, has appointed a special committee to work out a plan for the establishment of sample warerooms in foreign countries.

German Pig-Iron Syndicate.—German trade papers, in announcing the success of the long-continued attempts to renew the syndicate of the pig-iron manufacturers of Germany, say that the chief cause which united the divergent interests was the fear of competition from American iron and steel. Conferences have been held lately in this city by representatives of leading Austrian and German iron works and mining companies to consider the situation.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 9, 1903.*

Increase in the German Consular Corps.—It is reported that a bill to increase the consular corps, which has already been prepared, will be introduced into the next Reichstag. It is not known in just what countries Germany intends to add to her present corps, but the number is certain to be increased in the United States. At the present time Germany has but six professional consulates in the United States.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, October 15, 1903.*

Danish Fresh Meat for Berlin.—Under date of October 9, 1903, United States Deputy Consul-General S. W. Hanauer, of Frankfort, Germany, reports that a joint-stock company has been formed in Copenhagen to export fresh meat, by means of cold-storage cars, to the city markets of Berlin.

Origin of an Industry.—Under date of October 12, 1903, United States Consul Hugo Muench, of Plauen, Germany, reports that the pearl-goods industry at Adorf, in the consular district of Plauen, had its origin through the finding of pearl shells or mussels in the little stream (Elster) which flows through the town. Now a number of factories flourish there, and the bulk of the raw material, fashioned into many useful as well as ornamental things, has to be brought from Japan and America.

Closing of Beet-Sugar Factory in Germany.—The Hünfeld Beet Sugar Factory and Refinery, located at Hünfeld, in the Province of Hessen-Nassau, has closed down. Its machinery and electric plant have already been sold to a foreign firm, and the buildings are to be offered at public sale. It is said that this action was taken because of the precarious position of the German sugar industry.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, October 8, 1903.*

Purification of Milk by Ozonization.—An apparatus in use in Germany for the purification of milk by ozonization is so constructed that the milk contained in a vessel flows thence in a thin stream into another vessel, placed below. The wires and carbon points of a strong electric battery are so arranged that the light arc passes through the stream or near it. The ozone which is thereby engendered from the oxygen of the air is said to be sufficient to kill all micro-organisms contained in the milk—*Richard Guenther, Consul-General, Frankfort, Germany, October 14, 1903.*

Premiums for Improved Methods in Manufacturing Varnishes.—At the third general meeting of the Association of German Varnish Manufacturers recently held at Berlin, the board of directors was empowered to offer premiums or prizes of several thousand marks for methods of manufacturing varnishes which involve noteworthy improvements. As an important subject for consideration, a method for the deodorization of oil of turpentine is mentioned. The jury for awarding prizes consists of the board of directors and four other members. Communications are to be addressed to Mr. Louis Mann, commercial judge, Berlin, W. Meinecke Strasse 4.—*Richard Guenther, Consul-General, Frankfort, Germany, October 14, 1903.*

Discrimination against Foreign Students in Germany.—The Saxon Minister of Education and Ecclesiastical Affairs has recently issued an order changing the statutes of the Royal Polytechnical School at Dresden respecting foreign students to take immediate effect. Henceforth all students who are not German subjects must pay, in addition to the regular tuition, other fees, the amount of which will depend upon the number of hours and courses taken by a student. The technical school at Charlottenburg, near Berlin, has changed its curriculum regarding foreigners, and last year the University of Leipzig changed its fee schedule so as to make it almost twice as expensive for a foreigner to graduate as it is for a German subject.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, October 7, 1903.*

Community Stores in Germany.—Under date of October 12, 1903, United States Consul Hugo Muench, of Plauen, Germany, reports that a large saving has been effected to the poorer classes in Plauen by the prevalent system of community stores (Konsum-Vereine), which have, however, played havoc with the interests of shopkeepers. These stores, as the name indicates, are managed in

the interest of the consumers, and at stated periods every participant secures a pro rata dividend out of any savings realized. In purchasing supplies for these stores even the wholesalers are frequently avoided and the goods secured directly from the producer. There are quite a number of these stores in and about Plauen, and they continue as popular with the patrons as they are unpopular among the regular storekeepers.

Mosel-Saar Canal.—The following resolution, passed by the Chamber of Commerce of Metz on September 26, was translated from the *Handel und Gewerbe* of October 10, 1903, by the Bureau of Statistics, Department of Commerce and Labor:

The representatives of trade and industry of Lorraine learn with satisfaction that the Prussian State government has taken measures to build the Mosel-Saar Canal. In the interest of the industrial life of our country, we consider this canal indispensable. The chamber of commerce expresses the hope that the State committee will realize the importance of the canal and commission the ministry to hasten its completion. We therefore ask, in addition to the State committee, the government of Alsace-Lorraine and the Minister of Public Works at Berlin to use their endeavors toward the building of this canal. Other interested chambers of commerce are requested to aid this enterprise.

Instruction for Teachers in Commercial Schools.—The Prussian Royal Gazette for Trade and Industry announces that a session devoted to the preparation of teachers in advanced commercial schools will be held in Berlin, under the auspices of the Minister for Trade and Commerce, from November 25 to December 22. Courses will be offered in bookkeeping, business law, commercial law, banking, exchange, mail and railroad traffic, and business correspondence. Discussions will be held relative to methods and plans of teaching, and visits to factories will be made. Forty to fifty teachers will take part in the session, instruction being free; their fare for both ways is paid, and they receive an allowance of \$1.25 daily.

Consumption of Fish in Germany.—The inhibitory measures in Germany against the importation of foreign cattle and meat products have greatly advanced the price of meat in the country, causing a considerable reduction in the consumption thereof, as the middle and working classes can not afford to pay the high prices demanded. In consequence of this, the consumption of fresh, dried, and salted fish has largely increased. A Hamburg fishing company has sent one of its cold-storage steamers to eastern Siberia to take in a cargo

of salmon. Another Hamburg company has opened a depot and packing houses at Matarieh-Menzaleh, Egypt, for the curing and shipping of eels caught in the Nile and affluents, which are brought to Hamburg by way Trieste. In German cities and towns the increased consumption of fish is making itself perceptible by the new additions of shops dealing in fish. Formerly, fishmongers were few in number, their custom only being among the rich and the first-class hotels.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 21, 1903.*

Customs Duties on Returned German Goods.—The Chamber of Commerce of Lower Franconia, Bavaria, has petitioned the German Government to effect an agreement with foreign governments whereby the customs duties collected on German goods upon their entry into foreign countries may be refunded to the shipper or agent when such goods are returned. Customs bureaus for the adjustment of the duties on such returned goods are already established at Berlin, Frankfort, Hamburg, Bremen, and other commercial centers in Germany. The return of German goods, owing to the allegations of the foreign purchasers that they are defective, is of constant occurrence. It is claimed that many of these allegations are made to force concessions from the manufacturers, the buyers knowing that the manufacturer or his agent, having to forfeit the customs duties already paid, would rather make the concession than suffer a greater loss by the return of the goods.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 20, 1903.*

Mexican and Bermuda Patent Laws.—The Bureau of Statistics, Department of Commerce and Labor, has on file, where it may be consulted by interested parties, a careful English translation of the new patent laws of Mexico, furnished by Edward M. Conley, United States deputy consul at the City of Mexico. There is also on file at the Bureau a copy of the Bermuda patent, designs, and trade-marks act of 1902, sent to the Bureau by W. H. Heyl, United States vice-consul at Hamilton, Bermuda.

New Smelter for Monterey.—The Monterey Daily News of this date says:

Governed by the belief that the American Smelting and Refining Company is charging them unfair prices for handling their ores, mine owners throughout this State and neighboring States are organizing a company for the erection and operation of a \$3,000,000 smelter, with the avowed intention of fighting the trust.

I am informed that this smelter is to be located at Monterey, that \$1,500,000 has already been subscribed, and that very soon the organization will be completed and the erection of the new smelter will commence.—*Philip C. Hanna, Consul-General, Monterey, Mexico, November 12, 1903.*

Railroad-Building Bids in Mexico.—Under date of October 26, United States Consul W. W. Canada, of Veracruz, Mexico, sends the following translation of an article from the Mexican Herald, City of Mexico, of October 23, 1903:

Bids are invited for the construction of the first section of the railroad which is to start from San Juan Bautista, Tabasco, Mexico, or from a point on the left bank of the Rio Gonzales, touching at the towns of Nacajuca, Jalpa, and Cunduacan, and terminating at a point on the bank of the Rio Seco. Parties or companies able to give sufficient guaranty and wishing to obtain the contract for the construction of this first section of railroad can obtain all necessary information from the secretary of the board of directors, No. 21, Cinco de Mayo street, San Juan Bautista, Tabasco, Mexico. It is understood that the road is to be narrow gauge, 914 millimeters (3 feet) between the rails, and from 20 to 25 kilometers (13 to 16 miles) in length. It is to be operated by steam.

Mexican Coal.—During the past ten years imports of coal and coke from the United States have increased rapidly, owing to the extension of railroads and the industrial development of the country. It seems probable, however, that these imports, while they may continue to gain in actual value on account of such development, will show a relative decline. One of the subcommissions of the Mexican monetary conference for the study of the question of a future currency policy has reported that the annual production of coal and coke in Mexico now amounts to 1,000,000 tons, and that, at the present rate of increase, this production will be doubled by 1905. The Mexican National Iron and Steel Company, an American concern, which is exploiting the famous "iron mountain" on the outskirts of Durango, now procures all its coke from the Sabinas district in the State of Coahuila, where about three-fourths of the Mexican output of coal and coke is produced. The price paid for coke here at Durango is \$7 to \$10 per ton.—*James A. LeRoy, Consul, Durango, Mexico, October 20, 1903.*

The Monterey Steel Plant.—The Mexican Journal of Commerce, in its issue of October 1, 1903, says:

Monterey's \$10,000,000* steel plant, by far the most important industrial establishment in the Republic of Mexico, is now in operation and turning out 350 tons of steel daily. At present the output of the plant is confined to structural steel, but

* It is assumed that this steel-plant value is given in Mexican dollars, which, reduced to United States currency at the latest Treasury valuation, would be \$4,180,000.

within a few days the manufacture of steel rails will be commenced. Large orders for rails have been placed by several of the railroads of Mexico, and the management of the plant expects also to compete with the steel mills of the United States and Europe in supplying the demand for rails in Central and South America.

One thousand men are now employed, and in addition the company gives work to over 2,000 men at the iron and coal mines from which the needed supplies for the plant are drawn. The iron mines are located near Golondrinas, and the coal mines are in the northern portion of the State of Coahuila. The iron mines of the company are considered the richest in Mexico.

When the steel plant is in full operation and the iron and coal mines developed to meet the increased demand, the industry will give employment to 5,000 men.

The company was organized with a capital of \$10,000,000 on May 5, 1900. Work on the plant was commenced soon afterwards, and the fire of the immense blast furnace was started in April. Ten days ago the first steel was turned out.

“This industry will give Mexico a new place among the nations,” said Vicente Ferrara, president of the steel-plant company, in discussing the future of the plant. “Up to this time it has been thought of only as a country of mines and agriculture. There is nothing like manufacturing to develop a country, and our efforts and achievements will give the needed impetus to that industry. Enterprising men will see the advantage of manufacturing mining machinery, agricultural implements, and hundreds of other iron and steel products, now imported from foreign countries, and will follow our example.”

An English Chamber of Commerce in Italy.—The British consul at Rome urges his countrymen to establish an English chamber of commerce in Italy in order to advance the interests of the British export trade.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 19, 1903.*

Cotton Industry in Italy.—The British Board of Trade Journal, in its issue of October 8, 1903, gives the following table showing the estimated number of cotton spindles and looms in Italy for various years from 1897 to 1902. The table was compiled by the British consul at Milan from unofficial data in response to an inquiry. The consul adds that the official figures will probably not be ready for some time.

Year.	Spindles.	Looms.	Remarks.
	<i>Number.</i>	<i>Number.</i>	
1897.....	2,092,730	70,000	Annuario Statistico, 1900. Estimated.
1899.....	2,340,000	100,000	
1901.....	2,440,000	.....
1902-3 (June 30).....	2,700,000	130,000	

Consolidation of Electric-Light Companies in Milan.—At a meeting of the stockholders of the Società Fecnomasio Cabella, which was held at Milan, Italy, on October 4, 1903, it was decided to consolidate with the Società Italiana Brown, Boveri & Co., Milan, thus forming one large electric company in the city of Milan.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, October 6, 1903.*

Alcohol and Ferments Exhibition.—From April 16 to May 31, 1904, an international exhibition of alcohol-using machines and of fermentation products will be held at Vienna. The purpose of the exhibition is to give a general idea of the present development of the alcohol industry and the various ways in which alcohol can best be used. The exhibition will also include brewing, distilling, and manufactures of malt, starch, and vinegar. For further information apply to the Bureau des Bundes der Industriellen Niederösterreichs (bureau of the association of industrials of lower Austria), Eschenbachgasse No. 11, Vienna, Austria.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, October 27, 1903.*

Wages in Italy.—Consul Pietro Cuneo, of Turin, Italy, under date of October 6, 1903, writes:

Seeing some men and boys carrying brick and stones in baskets on their shoulders, with no further protection than their shirts, up four stories to the masons and bricklayers, and noting how hard they worked, I asked a well-informed person how much they received per day and he gave me the following general trade figures as those prevailing in the city of Turin:

Laborers:

Boys	\$0. 20 to \$0. 30
Men.....	. 40 to . 50
Bricklayers .....	. 80 to 1. 00
Stonecutters and carpenters.....	. 60 to . 70
Painters and frescoers.....	. 40 to . 50
Experts.....	. 60 to . 75
Laborers in the employ of the city.....	. 40 to . 60

Land Carriage and Aeronautic Exhibition in Italy.—In a note from the Italian embassy, forwarded by the Department of State, attention is called to the programme of the International Exhibition of Means of Carriage by Land and of Aeronautics, to be held in Milan in 1905 to celebrate the opening of the Simplon Tunnel. The United States is invited to exhibit in the following

sections: Transportation on earth and in the air, marine transportation, insurance, decorative art, and workshop of industrial art. The exhibition will doubtless offer an excellent opportunity to see and to show the progress made along the lines indicated.

Abyssinian Trade.—German and Austrian commercial bodies recommend the establishment of steamship lines to Djibuti for the purpose of cultivating commercial relations with Abyssinia, the trade of which is now controlled by the French and English. It is believed by the members of these bodies that Abyssinia promises a large field for European goods. United States Consul-General Skinner's mission to Abyssinia is much discussed by the German and Austrian press. This new advance move of the United States is watched with much solicitude by Europeans.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 19, 1903.*

Dock and Lighter Charges in Guatemala.—The dock and lighter charges in Guatemala are very heavy, and it is important that the packing of goods be substantial and firm. There is no escape from these charges, for it is practically impossible for a new company to get a foothold at any of the ports in this Republic, so the transfer company has the monopoly and is unrelenting in its charges.—*Alfred A. Winslow, Consul-General, Guatemala City, Guatemala, October 12, 1903.*

Commercial Travelers in Honduras.—Commercial travelers need no license to transact business in Honduras. They should have a good knowledge of the Spanish language, and above all should understand the characteristics and peculiarities of the people. The hustling, rushing "drummer" has no place here. Merchants and dealers transact business leisurely, even in the largest importing houses where there is much to do. No one is in a hurry to make or spend money. A full line of samples is indispensable; buyers will not consult catalogues and circulars, nor will they purchase on trial. The goods and articles must be placed where they can personally examine them. Long credits do not prevail, because business is done on cash payments by small buyers, and the merchants are not willing to pay heavy interest on their bills of goods. Commercial travelers by coming here have the advantage of examining and making a study of business and trade conditions, which aids them materially in giving directions to their houses in the matter of

packing, forwarding, and arranging their goods to enter the custom-house with the least expense possible. They are enabled also, after personal interview with merchants here, to give explicit information to their establishments on the quality, style, and patterns of goods and articles in their respective lines.—*Alfred K. Moe, Consul, Tegucigalpa, Honduras, October 14, 1903.*

Substitute for Cork.—On the east coast of Lake Tchad, in central Africa, a tree has been discovered the wood of which is of less specific gravity than cork wood. Might not this material be of importance in some branch of American manufacture?—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, October 29, 1903.*

An "Alum Mountain."—German papers report that an "alum mountain" exists in China, which is not only noted as a natural phenomenon, but is also a source of wealth for the people of its vicinity, as they annually take many tons of alum from it. The mountain is said to have a circumference at the base of not less than 10 miles and is nearly 1,900 feet high. The alum is quarried in immense blocks, is then heated in large ovens, and afterward dissolved in boiling water. From this liquid the alum crystallizes in layers of about half a foot in thickness, which are cut up in blocks of 10 pounds each. The Chinese use it mainly for purifying water.—*Richard Guenther, Consul-General, Frankfort, Germany, October 3, 1903.*

Caoutchouc in Ceylon.—*Deutsche Kolonialzeitung*, in its issue of September 24, 1903, says:

The area planted in Para rubber in Ceylon is estimated at 3,000 acres. The best results have been secured in the South Kaltum district, which is about 100 feet above sea level and has an average rainfall of over 98.5 inches. The soil is mostly a sandy loam. Para rubber thrives also at an altitude of 3,000 feet and will endure a variation of rainfall of from 70.9 to 147.6 inches. Each tree produces about a pound, worth about 95 cents. The quality of the rubber is often impaired by the use of such acids as lemon juice to hasten the extraction of the juices from the trees.

Bids for Belgian Freight Cars.—A telegram has been received from Brussels, Belgium, informing German manufacturers that the Belgian State railroads are about to ask for bids upon 3,200 freight cars and 100 locomotives, in addition to a large quantity of other

railroad supplies. Detailed information, in book form, may be had by applying to the Bureau Central des Renseignements, Rue des Augustins, 15, Brussels, Belgium.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, September 21, 1903.*

Automobiles in Cuba.—From a report recently sent from the Belgian Commission in Cuba to the Department of Foreign Affairs in Brussels, an item concerning the use of automobiles in Cuba may interest our manufacturers and exporters of automobiles. Cuba is regarded by the commission as an excellent market for automobiles on account of their constantly increasing use. The kind of carriage most in demand is the vehicle known as “voiturette,” run by gasoline or steam. The commission calls especial attention to the poor condition of the roads in Cuba, and recommends a strong, well-built automobile, of about 10 horsepower, and moderate in price, as being the most likely machine to meet with quick and profitable sale.—*Geo. W. Roosevelt, Consul, Brussels, Belgium, October 16, 1903.*

Taxation in Cuba.—The United States minister at Habana, Mr. Squiers, under date of October 20, 1903, sends translation* of the regulation issued by the President of Cuba on September 11 (published September 17), providing for collection of the taxes voted in the law of February 27, 1903, to pay interest on and provide a sinking fund for the redemption of the proposed \$35,000,000 loan. It was made the duty of the President by the law to make such rules as he deemed proper for the administration and collection of the taxes. Mr. Squiers says:

The regulation covers: Collection of the taxes (which shall be by stamps); method of using stamps; administration of the taxes; inspection, infractions, penalties, agreements (whereby use of stamps may be avoided); and enforcement of the taxes.

Article 99 grants a term of sixty days in which to attach stamps to all taxed articles, and of thirty days from the publication of the regulation in which to present to administrators of rents and taxes of fiscal zones a sworn statement of taxed articles on hand, and to make application for the number of stamps required. By a decree of the Secretary of the Treasury of September 26, it was ordered that the sixty-day period should run from November 1, and that of thirty days from twenty days after the publication of the regulation—that is, October 7 to November 7.

* The translation of the regulation above mentioned is on file in the Bureau of Statistics, Department of Commerce and Labor, where it may be seen by those interested therein.

This regulation has brought forth a storm of protest from all merchants and manufacturers affected. The opposition is probably not so much to the regulation as to the tax itself. Opposition would have been made to any other form of taxation. The foreign merchants and manufacturers are the first sufferers, for to them it means large disbursements to buy stamps or furnish the cash bonds required to make agreements.

Brazilian Coasting Trade Law.—German shippers and transportation agents have just been informed that the Brazilian Congress is about to repeal the coasting trade law of December, 1896, which requires that all coasting and river vessels shall be of Brazilian register.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, October 7, 1903.*

Policing of Buenos Ayres.—Mr. E. W. Ames, United States chargé d'affaires at Buenos Ayres, under date of August 20, 1903, sends copy of a decision of the Minister of Interior of the Argentine Republic concerning the policing of certain precincts of the port of Buenos Ayres. The greater part of American shipping that enters the port, adds Mr. Ames, lies alongside the bank of the Riachuelo, therein referred to. Mr. Ames also sends copy of the regulations of the port, referred to in the minister's decision, which is filed in the Bureau of Statistics, Department of Commerce and Labor, where it, together with the decision of the Minister of the Interior, printed in English, may be seen by parties interested therein.

Compulsory Vaccination in the Argentine Republic.—Under date of September 17, 1903, Mr. E. W. Ames, United States chargé d'affaires ad interim at Buenos Ayres, Argentine Republic, transmits a copy and translation of a law passed by the Argentine Congress on August 27, 1903, providing for compulsory vaccination in the federal capital and in the national territories. The law and translation have been sent to the headquarters of the United States Marine-Hospital Service in Washington.

Taxation of Foreign Corporations in New Brunswick.—The provincial legislature at its last session adopted a new law, which went into effect July 1, 1903, imposing a tax on companies incorporated outside of the Province of New Brunswick and doing business therein by branches. A license fee of \$50 will be placed on all companies with a capital of \$100,000 or less and \$100 on companies with a capital over \$100,000. The fees are to be paid annually.

The act will not apply to companies that have to pay license under any other provincial law. It will not be applied to commercial travelers, but only to outside companies or corporations that have a place of business in the Province. It was intimated by the attorney-general that it is not impossible that, in order to raise more revenue, the next session of the legislature will be asked to approve of a law that a license fee be paid by all corporations.—*Gustave Beutelspacher, Commercial Agent, Moncton, Canada, September 19, 1903.*

Sample Shipments on Hungarian Steamships.—Last December the Hungarian Minister of Commerce informed the subordinate commercial bodies of the Kingdom that the Royal Hungarian Adria Steamship Company had agreed to carry on its steamers sample shipments of Hungarian manufactures to the amount of 10 tons or less, or of 353 cubic feet, free; also 50 tons, or 1,765 cubic feet, at half the regular rates. The privilege was provided for in the law chartering the Adria company. It now remains to be seen what arrangement will be made for North American trade with the Cunard Line, which employs the Adria company as its Hungarian agents and is about to run direct steamers to the United States from Fiume. Steamers of the Adria Line run only to Central and South American ports. The exporters of the United States may well consider whether similar privileges ought not to be enjoyed by American manufactures to Mediterranean, and particularly East Adriatic, ports.—*Frank Dyer Chester, Consul, Budapest, Hungary, September 22, 1903.*

Exposition at St. Petersburg.—Under date of October 12, 1903, the Department of State transmits twenty-two copies of the regulations and blank application forms of the Exposition of Metallic and Stone Art to be held at St. Petersburg, Russia, from November 15 / 28, 1903, to February 10 / 24, 1904. These regulations and blank forms can be had by applying at the Bureau of Statistics, Department of Commerce and Labor.

Montenegro's Tobacco Monopoly.—It is officially announced that the Government of Montenegro has leased its tobacco monopoly to a Venetian company, which has been formed with a capital of 1,500,000 francs (\$289,000). Besides furthering the production,

manufacture, and export of Montenegrin tobacco and tobacco products, this company will reorganize the monopoly, building a factory, with head office in Montenegro's chief city—Podgoricza—and establishing stores in Niksicz and at the port of Antivari.—*Frank Dyer Chester, Consul, Budapest, Hungary, October 26, 1903.*

Agricultural Schools in Spain.—United States Vice-Consul Adolphe Danziger, writing from Madrid under date of October 12, 1903, says that the Government of Spain is to open fourteen agricultural schools in various parts of the Peninsula. They are to be practical means of educating farmers not only in regard to the crops raised, but in the use of agricultural machinery and implements. While they will be governmental institutions, the contracts to equip them will be let to private parties and bids are soon to be asked for.

Sugar Trust in Spain.—It is reported that of the eighty or more beet and cane sugar factories of Spain, all except two or three have just been merged in a sugar trust. The former finance minister, Lopez Puigcerver, has been elected chairman of the board of directors. The beet-sugar industry of Spain, although comparatively young, is already far more important than the cane-sugar industry. The two together produce almost 100,000 metric tons annually, some of which is exported.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, October 3, 1903.*

Russian Sugar for Swiss Consumption.—The following is a translation by United States Consul H. L. Washington, of Geneva, Switzerland, from the Swiss Commercial Bulletin of September 1, 1903:

In a report to the Federal Government by the Swiss consul-general at St. Petersburg on economic conditions in 1902, it is stated that several Swiss firms had applied to him to be placed in communication with Russian sugar refiners desirous of exporting their products to Switzerland. It may be remembered that Russia refused to join in the convention of Brussels, and that after September 1, 1903, as before that date, she will pay a premium on exported sugar. Switzerland thus far has not imported Russian sugar, but last spring a movement was noted on the part of Russian sugar manufacturers desirous of supplanting Austria in the Swiss market, and the attempt to come to an understanding between the Swiss consumer and the Russian manufacturer now appears to be equally desired by both.

Gold Production of the Transvaal.—The following table, prepared in the Bureau of Statistics, Department of Commerce and Labor, shows the output of gold from the whole of the Transvaal (Rand and outside districts) since 1897:

Year.	Value.	Year.	Value.
1898	\$78,078,783	1902	\$35,378,910
1899	76,806,218	1903 (first 9 months).....	43,686,069
1900	7,093,819	Total.....	245,981,773
1901	4,937,974		

During October and December, 1899, and January, February, March, and April, 1901, there was no output of the mines. March was the only month in 1900 in which there was an output.

The following table shows the output in ounces for Rhodesia during the same period.

Year.	Quantity.	Year.	Quantity.
	<i>Ounces.</i>		<i>Ounces.</i>
1898	24,555	1902	194,268
1899	65,303	1903 (first 9 months).....	179,470
1900	91,940	Total.....	727,579
1901	172,061		

Swedish Trade and Industries.—In a report to his Government, British Consul Duff calls attention to the industrial and trade conditions of Sweden. According to the Commercial Intelligence, he says:

Following the example of other countries, numerous trade combinations have been formed in Sweden, especially in timber matches and mining, which require much capital. During the year dividends were, on the whole, insignificant. The banks and sugar mills gave good returns, but the textile industry showed a particularly poor result, as did also the iron works and sawmills. The industries of the country seem to endure the depression fairly well, protected as they are by considerable duties to exclude foreign competition. Since other nations began to make a movement toward protection, or at any rate what is termed "fair trade," there has been much commotion in Sweden. As an example, great dissatisfaction has arisen owing to the new German customs tariff law, by which numerous articles of export from Sweden will be affected, if it is enforced as it stands. Strikes have not been infrequent, but employers have combined to counteract this unfortunate state of affairs, in most instances successfully. It is stated that there is a movement throughout the country to establish poultry yards on a large scale and on rational principles, so as to render the undertaking remunerative. The consul explains that the country is excellently adapted for this purpose, and the climatic change that the last fifty years has brought about is greatly in its favor. Instead of importing eggs it is expected that not only the requirements of the country will

be amply satisfied, but that there will be a not inconsiderable surplus for export. Poultry for the table is also an object of importance aimed at. There is scarcely a doubt existing as to success, providing the import duty on maize is canceled, which is greatly desired.

Arsenically-Dyed Goods Prohibited in Sweden.—The Chamber of Commerce of Chemnitz, Germany, has petitioned the Imperial German Chancellor to make efforts to induce the Swedish Government to repeal or modify the regulations prohibiting the importation of goods colored or dyed with preparations containing arsenic. The chamber also requests that a central inspection bureau be established in Sweden, with experts to investigate the presence of arsenic in goods entering Sweden. The law particularly affects the importation of wall papers, carpets, dry goods, and textiles. While it is admitted that aniline dyes, other colors, and manganese oxide may contain traces of arsenic, yet there is no cause for fearing injurious effects therefrom. A similar petition was presented to the German Chancellor in 1899, but the negotiations with the Swedish Government failed of favorable results.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 10, 1903.*

End of the Drought in Queensland.—Under date of September 20, 1903, United States Consular Agent W. J. Weatherill, of Brisbane, Queensland, reports that the drought which prevailed in Queensland during the years 1900, 1901, and 1902 is now ended, and the present season throughout the State is almost an unprecedentedly good one; should the present favorable weather continue for a few weeks longer crops of cereals, fruits, etc., promise to be of the largest and best quality known for years.

Increased Duties on Matches in Venezuela.—United States Consul E. H. Plumacher, of Maracaibo, Venezuela, under date of October 7, 1903, reports the issuance of a decree recently by the President of that Republic placing imported matches in the sixth class of the tariff, which subjects them to a duty of 3 bolivars (57.9 cents) per kilogram (2.2046 pounds).

Mycenæan Marble.—United States Consul M. J. Burke, writing from St. Thomas, Ontario, Canada, under date of October 26, 1903, reports improvements in the manufacture of Mycenæan marble, an artificial material used extensively in the decoration of halls, houses, hotel lobbies, etc. In the report this material is sometimes referred to as coral marble or coral tiling. The consul says the Mycenæan

marble is practically a real marble artificially manufactured; that it is greatly admired for its columnar and wainscoting effects; and that it has been put into many of the large hotels, public buildings, etc., of Canada and the United States. The color effects are considered especially fine and the durability of the tiles is said to be very great. Another advantage noted is the applicability of the tiling to almost any surface, rough or smooth. No patents have been taken out in the United States. The process is said to be a secret one, known only to the inventor, who has sold his rights to a Canadian company. Parties interested in securing further information will no doubt find the consul ready to cooperate with them in obtaining it.

Roumanian Petroleum.—Mr. C. S. Wilson, chargé d'affaires ad interim, reports from Sinaia, Roumania, October 7, 1903, that the exportation of petroleum during the first six months of 1903 was 52,485,328 kilograms (15,904,645 gallons), against 36,925,000 kilograms (11,189,394 gallons) for the same period in 1902, an increase of 15,560,238 kilograms (4,890,360 gallons). Of this amount England took 4,156,483 gallons, Germany 3,746,363 gallons, Austria 3,011,515 gallons, France 1,912,727 gallons, Holland 1,297,273 gallons, Italy 1,188,788 gallons, and Bulgaria 334,242 gallons. France appears for the first time in the list of importing countries. England, which last year ranked third, this year occupied the first place. The exportation to Italy and Bulgaria has also greatly increased since 1902. Mr. Wilson adds:

In this connection it may be of interest to know that the Deutsche Bank of Berlin, which is connected with the Steana Romana (one of the two principal petroleum companies of Roumania), has recently acquired an interest to the amount of 2,000,000 crowns (\$406,000) in an important petroleum concern in Galicia.

The Cotton Crisis in Europe.—The fluctuation of the American cotton market during the past twelve months has greatly disturbed the European spinners and weavers of cotton. Many of the mills continued to work at a loss, some entirely failed, while others sought to evolve novelties for which fancy prices might be obtained. Thus, the "mercerization" of the Egyptian cotton—producing a most plausible and deceptive imitation of silk—and the manufacture of cotton blankets and other specialties were strongly pushed. The desire to multiply the present sources of supply has induced a strong feeling among German manufacturers in favor of cotton culture on a large scale in German and British African colonies as well as in other regions wherein cotton has not hitherto been considered indigenous.—*Hugo Muench, Consul, Plauen, Germany, October 12, 1903.*

Forest Conservation in Europe.—The protection of the forests of Europe is a subject which has long engaged the attention of economists and officials of nearly all countries of the Continent, and in several states regulations for that purpose are in effect. On the operation of the Swedish law, *Nachrichten für Handel und Industrie* comments as follows:

The value of the wood exported from Sweden in 1901 amounted to 36 per cent of the total exports of that country and the Government, realizing the necessity of protecting the forests, has passed a law for that purpose. The new law compels Swedish forest owners to follow a regular system of forest protection. Denuded areas, now covering hundreds of thousands of acres, are to be reforested, and it is provided that plans for cutting timber shall be laid before a special committee having the reforestation of the denuded areas in charge. While this law limits the rights of the owners and the use of the forests, it will be of unquestionable value to Sweden in the protection of its forests.

Commercial Intelligence, an English trade paper, discussing this subject, has the following comment on the result of the agitation for forest conservation in Germany:

Dr. Frederick Rose, in a valuable and interesting report on forestry and forest economy in Germany, points out some very important facts. He says that it seems as if the number of agricultural holdings with forest lands attached is gradually declining; on the other hand, forest lands show a gradual but distinct increase. It is interesting to note the successful results that are accompanying Germany's efforts to secure from its forests the most profitable financial as well as economic and hygienic results. Nothing is neglected that will secure the woodlands from wanton devastation, and everything is done that science indorses for their development.

Port Tonnage of the World.—The following table, prepared in the Bureau of Statistics, Department of Commerce and Labor, shows the relative rank in tonnage movement of the principal ports of the world. Figures of coastwise trade are not included:

Port.	Year.	Entered.	Cleared.
		<i>Tons.</i>	<i>Tons.</i>
London.....	1902	10,179,023	7,385,085
New York.....	1902	8,982,767	8,415,291
Antwerp.....	1902	8,373,528	8,347,483
Hamburg.....	1902	7,860,323	7,993,166
Hongkong*.....	1901	7,383,683	7,340,586
Liverpool.....	1902	6,843,200	6,314,514
Cardiff	1902	4,688,088	7,868,556
Rotterdam	1901	5,950,445	5,733,763
Singapore †.....	1901	5,459,032	5,453,999
Marseilles.....	1902	4,911,784	4,552,088
Tyne ports.....	1902	3,615,046	4,754,301
Gibraltar.....	1901	4,171,350	4,159,272

* Exclusive of Chinese junks engaged in the foreign trade. The tonnage of these vessels entered and cleared was 1,126,931 and 1,130,279, respectively, in 1901.

† Exclusive of war ships, transports, native craft, and vessels under 50 tons, but inclusive of vessels engaged in trade between the Straits Settlements.

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COTTON GROWING IN BRITISH POSSESSIONS.

(From United States Consul Boyle, Liverpool, England.)

EFFORTS AT COTTON GROWING OUTSIDE OF THE UNITED STATES.

Attention has several times been drawn in these reports to the efforts that are being made to establish cotton growing in countries outside of the United States, particularly in the British colonies and dependencies. These efforts were at first generally looked upon, both in England and in the United States, as doomed to failure, and indeed many of those who were active in starting these enterprises were anything but sanguine of success. There is a far different feeling now, however, among those who have kept informed. These experiments in cotton growing are for the most part being conducted in the British colonies and dependencies, but they are also being carried on in the German, French, Portuguese, and Italian colonies. Russia is putting forth energetic efforts to increase the production in her Asiatic possessions, and Cuba is mentioned as a likely cotton-producing country.

THE UNITED STATES TO CONSUME ITS OWN PRODUCT.

There is a conviction that in a comparatively short time the United States will consume most of the cotton she now produces, that even with a considerably increased acreage the population of the United States and the ever-growing foreign trade of the country will within a measurable period catch up with the extra production, and that if there should be an American surplus it will soon cease to be sufficient to supply the foreign demand. At any rate, it is insisted that the world's supply of cotton is not sufficient for the demands.

ENGLAND'S DEPENDENCE ON THE UNITED STATES FOR COTTON.

About 80 per cent of the total cotton supply of the world comes from the United States, and it is argued that a failure, or partial failure, of this supply would be an international calamity which would fall nowhere heavier than in England. Of all the manufactured exports of the United Kingdom cotton goods take the lead,

It is a very remarkable fact that the cotton industry of the United Kingdom has been almost stationary for the last fifteen years or more, and this applies to both the importation of the raw material and the exportation of manufactured products. For the raw material to keep up this great industry the United Kingdom has so far been, for the most part, dependent upon the United States. In the year 1902 the total importations of raw cotton into this country from all the world were 16,220,874 cwts. (1,816,737,888 pounds), of which the value was \$205,746,010. Of this amount the United States supplied 12,177,136 cwts. (1,363,839,232 pounds), valued at \$146,419,645. Even these figures do not convey the full extent of British dependence upon the United States, for practically all the cotton imported from elsewhere is of a special kind, used for mixing or "mercerizing," and at present England could not procure anywhere else the kind of cotton she now imports from the United States and which is primarily and absolutely necessary for the standard goods she manufactures. It is interesting, in view of the present movement, to note that the entire British possessions sent to this country last year only 299,447 cwts. (33,538,064 pounds), being a less amount than any of the preceding years. More than half came from Madras, India. Africa's share was practically nil. From Egypt came 3,168,697 cwts. (354,894,064 pounds), a substantial increase over former years.

EXPORTS OF ENGLISH COTTON MANUFACTURES.

In 1887 the value of the total cotton manufactures produced in and exported from the United Kingdom was \$297,902,205; in 1890, \$310,447,210; in 1895, \$272,276,340; in 1900, \$310,045,750; in 1901, \$328,542,910; and in 1902, \$325,169,570.* Three reasons are advanced for the nonprogressive state to which this great manufacturing industry of England has come: (1) The effect of tariffs in other countries, and the consequent development of home production in those countries; (2) the difficulty of procuring an abundant supply of cheap cotton; and (3) the limitations of production by inferior plants and the regulations governing labor—both trade-union and

* The exports of British cotton manufactures in 1902, as compiled in the Bureau of Statistics from British official returns, were as follows:

Cotton yarns.....	\$36,060,699
Cotton thread.....	17,157,134
Plain piece goods.....	155,515,134
Printed and dyed piece goods.....	113,158,860
Mixed piece goods.....	2,068
Lace and net.....	14,919,716
Hosiery	2,276,803
All other goods.....	13,074,451
Total cotton manufactures.....	352,173,865

It is evident that Consul Boyle did not include cotton yarns (\$36,060,699) in his estimate for the exports of British cotton manufactures in 1902.

governmental regulations. Contrary to general understanding, the exportations of cotton goods from the United Kingdom to the United States showed a substantial gain in 1902. The value of these exports during the past five years was as follows:

1898.....	\$10, 884, 735
1899.....	14, 533, 515
1900.....	15, 657, 665
1901.....	14, 165, 655
1902.....	17, 748, 790

EFFECTS IN ENGLAND OF COTTON "CORNERING."

There is an accumulating irritation and even bitterness in all foreign consuming countries, and particularly in England, at what is termed the "cornering" of American cotton, such as has been going on recently. This year trade has been disorganized, thousands of operatives have had to work short time, and some mills have had to shut down altogether, and as a consequence there has been and is now very much suffering, especially in the Lancashire district. So great is the present distress in this county that public soup kitchens have had to be established, and the uncertain condition of the market has recently caused several serious failures in Liverpool. The depression has been almost unprecedented—perhaps exceeded only by the dreadful period during the American civil war. It may be doubted, however, whether the cornering is responsible so much as charged for the "famine" in cotton in Lancashire. The real cause, it is pointed out, is the consumption overtaking the supply, consequent on the partial failure of last year's crop.

BRITISH HOPE FOR BRITISH COTTON SUPPLY.

The significant growth of the new "imperial sentiment" among the British people has led to the desire to produce within the Empire, as much as possible, the things the Empire consumes. There is now a widespread and profound belief among the cotton spinners of this country that the only salvation of their trade is British-grown cotton. By this it is not meant that British-grown cotton will, at least within anything like the near future, altogether take the place of American-grown cotton. The hope and expectation is that the British product will be supplemental to the supply drawn from the United States. It is argued that this supplemental British supply will not only meet the expected shortage in American cotton, but will prevent the cornering and manipulation of American cotton. It is claimed that this cornering and manipulation is possible largely because of the fact that the supply of staple cotton comes almost exclusively from one country, but that it would be impossible for

these operations to go on to any great extent if other supplies in fairly considerable quantities came from many different parts of the world.

The experiments which have been made during the past two or three years have demonstrated that good cotton can be grown in various parts of the British Empire. As to the quantity obtainable, the regularity of supply, and the trade conditions, these are matters which only the future can show. The secretary of the British Cotton Growing Association said to me, the other day: "Progress will necessarily be slow, but the association is confident of ultimate success." Here in Liverpool, which is by far the largest foreign market for American cotton, great skepticism has been expressed; and the movement has, indeed, been "pooh-poohed" as hardly worthy of serious consideration. But the movement has now compelled attention on the part of local cotton men as well as those of Manchester, and a number of leading brokers of both cities have become active members of the British Cotton Growing Association, and the Liverpool Cotton Association has subscribed \$5,000 to the experimental fund. Still, it must be said that Liverpool is not very sympathetic toward the movement. This can be explained by the fact that most of the Liverpool brokers are interested in maintaining the status quo. It is possible that the entire European cotton trade would be revolutionized if a fair supply came in from different parts of the world, supplemental to the American shipments. And if the outside supply came in in sufficient quantities to make the English consumers virtually independent of the American supply, it is not unlikely that that event would mark the destruction of the present potentiality of the manipulator, so far as this market is concerned. Speculation aside, the Liverpool broker naturally does not favor the new conditions and the disorganization which would probably at first characterize the trade when British-grown cotton became an appreciative influence in the local market. This consideration also affects the shipowners whose vessels now bring the cotton from the United States. But the movement goes on just the same, and its success is a contingency which must be faced, both in the United States and on this side, as an event quite possible. The men who are back of the movement are mostly master spinners, and they look at it as almost a question of life and death.

Mr. Chamberlain, the ex-Colonial Secretary, has taken a great interest in the movement, and through him the aid of the governors of the colonies has been obtained. The British Cotton Growing Association (with headquarters at Manchester) has a fund which it is intended shall be increased to \$250,000 (over \$150,000 having already been subscribed) for the purpose of purchasing seed, hiring

experts, and conducting experiments. Most of the seed so far purchased and the experts employed have come from America.

The following is a summary of what is being done in the various British colonies and dependencies:

AFRICA.

West coast.—Through arrangement with the British Colonial Office, cotton will be carried on the west coast government railroads free for two years, and a Liverpool steamship line has also agreed to bring free to England the first 1,000 tons. The various colonial governments pay the salaries and traveling expenses and furnish the land for the experiments, and the British Cotton Growing Association furnishes the seed, mechanics, agricultural implements, ginning and pressing machines, labor, etc., and undertakes to buy the cotton that may be grown. Cotton is indigenous to much of this territory. The statement has been made that cotton will not grow well in West Africa because there is no frost to kill the green trash after the picking, but those who have investigated the matter say that experience disproves the statement. The torrential rains seem to be a great difficulty, which, however, it is claimed, can be met by special methods of cultivation. Next to the primitive manner of cultivation the greatest impediment to development is lack of transportation, but that is being rapidly overcome. At first there was fear that the labor question would be an almost insuperable difficulty. The natives are naturally suspicious of white men, and they are not accustomed to hard, continuous, methodical toil. It has been found that the best way of handling them is through their chiefs, but these in turn will not embark upon speculative work until they can see their way to success. After having made experiments and conducted observations for a year the British Cotton Growing Association announces that there is every probability that a large supply of "medium staple" cotton will be grown on the west coast. Quite recently about 100 bales of West African cotton came to Liverpool, and the value ranged from 1 to 1.5 cents less than for "middling" American. This cotton was pronounced substantially equal to American, the only inferiority being in the matter of color, partly due to premature picking by the natives, to stains caused by too long exposure to the weather, and to insufficient ginning. All these disadvantages may well be overcome, and it must be understood that the particular consignments of cotton in question were not brought here by the British Cotton Growing Association, but by various shipping companies who are naturally anxious to take advantage of the opening for freights which the growing of cotton in West Africa promises them. On

September 28 a ship arrived at Liverpool with 300 tons of cotton from West Africa. On the same day several samples of cotton grown in the interior were exhibited on the Liverpool Exchange. The staple was deemed satisfactory, but the cotton was badly prepared for market. One of the greatest authorities on cotton in England says as to the production of cotton on the west coast:

It is probable that the quantity will be an increasing one, especially if prices similar to those now obtainable continue. It is also likely that the quality will improve, as the cotton received is indigenous cotton and not the outcome of expert advice or seed supplied by the British Cotton Growing Association.

It is claimed that West Africa and Nigeria have an area of land suitable for growing cotton equal to that of the cotton-producing districts of the Southern States of America—but this claim seems to be extravagant. Native labor can, it is said, be had at from 18 to 25 cents a day.

Lagos.—Several gins and 100 tons of seed were sent to Lagos in 1902. There were then 4,000 acres under cotton cultivation, and since then the acreage has increased to 30,000. The crop of 1902 was a failure, owing, it is said, to the seed having arrived too late. Two experts from the Lincoln Institute, Jefferson City, Mo., have been sent out.

Eighty tons of seed were sown last June. The first deliveries of a crop of between 3,000 and 4,000 bales are expected at Liverpool about Christmas. A local association has been formed for the purpose of buying direct from the native producers in the Lagos protectorate. It is the intention to use British instead of American gins. Reports a few weeks ago showed that there had been a great development of the cotton trade in the interior, and that extra trains had to be put on the government railroads to bring the supplies down to the coast. The natives have taken up cotton cultivation with enthusiasm. Years ago cotton was exported from Lagos to the value of \$380,000 per year. The fall in the price of American cotton caused the trade to cease to be profitable. It is believed that cotton can now be grown as cheaply as in the United States. The protectorate has sent two small consignments of cotton to Liverpool this season—the first a 10-ton lot, received here in the middle of August, and the second a 36-ton lot, received in September. On October 12 there arrived at Liverpool 2,500 bags (over 73 tons) of unginned cotton from Lagos. It will be ginned in Liverpool, as will all unginned cotton arriving until proper machinery has been put up near the cotton fields. Next month, under the auspices of the government, the British Cotton Growing Association, and the chambers of commerce of Liverpool and Manchester, an exhibition

is to be held at Lagos for the express purpose of creating an interest in the growth of cotton.

Nigeria.—One of the leading and keenest cotton men in Liverpool, who has thoroughly investigated the matter, gives it as his opinion that Nigeria (North and South) is destined to be a great cotton-producing country in the not distant future. He says it has suitable climate and soil and a vast population well adapted for the labor; in this latter respect he claims that Nigeria is superior to any of the other experimental fields. American experts and seed were sent out last year. Planting begins in the middle of May and the crop is gathered late in November or early in December. It is grown in rows like cassava, two seeds being planted together, separated from the next two by about 3 feet. Samples from northern Nigeria are said to have an excellent white color (in that respect they beat coast cotton) and to be silky and strong, but they lack length of fiber. Owing to the outbreak of hostilities in northern Nigeria no active steps in cotton growing have been possible up to the present. Cotton growing is already in existence in northern Nigeria, and there is an extensive manufactory of cotton cloths at Kano, which has been termed "the Manchester of Africa." The most serious difficulty is the lack of transportation facilities, and it seems doubtful whether cotton can be economically exported from this part of Africa unless a railway is constructed from the Niger to Kano.

Sierra Leone.—Last year an expert from Greenville, Miss., was sent to Freetown, Sierra Leone. In the spring a quantity of seed was forwarded. The cooperation of the chiefs was sought to obtain a proper supply of labor. Late reports from Sierra Leone express doubt as to the results from American seed, and these reports confirm German experience in Togoland. The expert there professes great hopes of the future of indigenous cotton, which he believes to be equal, if not superior, to middling American.

Gambia.—Early this year a practical cotton grower went to Gambia to give instructions and conduct experiments. There had previously been some cotton growing, but the native methods of cultivation were very primitive. In 1902 the chiefs of the protectorate had 1,200 pounds of Egyptian and 1,600 pounds of American seed issued to them, but the natives preferred their own cotton to that obtained from imported seed. They say that though the flowers and bolls are larger in the American and Egyptian plants than in their own they are not nearly as numerous, and that the tint is not as good. The results from the American and Egyptian seed are reported as "satisfactory" and "fairly satisfactory." The natives of this part of Africa do not seem to take kindly to cotton growing.

Gold Coast.—Early this year 26 bales of cotton grown near the Volta River, on the Gold Coast, were sold in Liverpool at 11 cents. As early as 1849 an official of the British Colonial Office reported that cotton grew with “singular facility” on the Gold Coast and was found in considerable abundance almost without cultivation. Owing to the great demand for men to work the newly developed gold mines there is difficulty in getting labor for cotton growing.

British East Africa.—It is believed that good, long-staple cotton can be grown on the east coast and also in Uganda, but the cost of transportation will be a serious item. The chief river, the Tana, resembles the Nile, and the surrounding population have many characteristics in common with the Egyptian fellahin. A short time ago a few bags came to Liverpool from East Africa, and the cotton was found to be very good and similar to Egyptian.

British Central Africa.—In the last annual report of the British commissioner of British Central Africa the details of exports are interesting as containing the first mention of the export of cotton. Last spring 600 acres were under cotton cultivation, and it is expected that by December there will be 4,000 acres.

Rhodesia.—The secretary of the department of agriculture says: “There seems no doubt that good cotton can be grown in Rhodesia, but it is doubtful whether, with our inadequate and inferior labor supply, it can be grown at a profit.” However, the British South African Company is making extensive experiments.

WEST INDIES.

Efforts are being made to revive the cotton-growing industry in Jamaica. Sea Island seed has been procured from the United States Department of Agriculture. Sea Island cotton is a native of the Barbados, and the government has undertaken to encourage its cultivation. Trinidad has sent to England some samples of cotton grown there. Cotton is also being grown on St. Christopher, St. Lucia, and the Bahamas, and the outlook is reported as favorable. Next January and February 400 acres of high-grade cotton will be planted in Antigua. There are now 4,000 acres under cotton cultivation in the smaller islands of the West Indies. During the summer a sample of Sea Island cotton was received at Liverpool from Barbados, and it was declared to be the best cotton ever seen in England. On August 26, 6¼ tons of Sea Island cotton from the West Indies were sold at Liverpool at 26 cents per pound. Other Sea Island cotton from the West Indies brought from 21 to 24 cents, and West Indian “uplands” brought 14½ cents.

It is said that at the close of the eighteenth century 70 per cent

of the cotton imported into England came from the West Indies, but cotton growing was gradually supplanted by sugar-cane culture.

BRITISH GUIANA.

The governor of this colony says that cotton grows wild there, and that from time immemorial it has been cultivated by the Indians. In the earlier years of the last century from 6,000,000 to 10,000,000 pounds of cotton were exported annually, but the trade has ceased for many years. It is suggested that the vast stretches of land along the seaboard be drained and devoted to cotton cultivation. An association has been formed in the colony to make cotton-growing supplemental to the sugar industry.

BRITISH HONDURAS.

Cotton grows in a wild state throughout British Honduras. American growers are negotiating for the purchase of land for cotton cultivation. It is reported that those back of this enterprise have in view the exportation of the product to the United States and not to England.

INDIA.

A movement is on foot in India to not only increase the quantity, but, what is more important, to improve the quality of the cotton. It is believed that India could easily produce an additional million bales of a quality that would find a ready market in Lancashire. Upper Burma is particularly spoken of in this connection.

CEYLON.

There has just been established by the government of Ceylon a cotton-experiment station of 150 acres. An American superintendent is expected, and Indian seed and laborers are being procured.

AUSTRALIA.

Attention is being paid to the question in central Queensland, and experimental stations are to be established. The difficulty of procuring cheap and suitable labor will probably prevent the success of cotton growing in this colony.

EGYPT.

The consumption of Egyptian cotton is increasing in England. In 1890 the United Kingdom imported 1,618,448 cwts. (181,266,176 pounds) and in 1902 the amount was 3,168,697 cwts. (354,894,064 pounds). The exportation of raw cotton from England to the United States is comparatively small, but is steadily increasing. In 1890 the exportations were only 63,079 cwts. (7,064,848 pounds), while in 1902 the figures grew to 650,667 cwts. (72,874,204 pounds). Most of these shipments were of Egyptian cotton. In the United States, as in

England, there is a developing demand for Egyptian cotton for mixing (for high-grade goods) and also for mercerizing. The wonderful system of water storage and irrigation recently established on the Nile under British auspices has greatly increased the acreage of cotton cultivation. It is said that the Egyptian crop this year will be 98,000,000 pounds more than that of last year.

SUDAN.

It is claimed that there are millions of acres of cotton-growing land in the Sudan, and that when the projected railways are completed a very large area will at once be put under cultivation. The qualities which can be grown are similar to Egyptian and even of a better fiber, it is claimed.

A fair quantity of cotton from the Sudan is expected at Liverpool and Manchester this season. The first consignment of Sudanese cotton recently arrived at Cairo from Khartoum and was declared to be superior in mercerizing qualities and in strength to the best Egyptian.

JAMES BOYLE, *Consul*.

LIVERPOOL, ENGLAND, *October 16, 1903.*

COTTON SUPPLY AND THE FRENCH COTTON INDUSTRY.

(*From United States Consular Agent King, Lille, France.*)

EFFECT OF THE LATE COTTON CRISIS.

No part of France is more directly affected by the cotton crisis than the city of Lille and its environs. The scarcity of cotton and high prices are checking the supply of material prepared and destined for the many textile factories situated in this part of France. To meet the situation manufacturers are curtailing their production by running their mills but four days a week. As a consequence, United States importers of cotton fabrics may look for an advance in prices.

LILLE AS A COTTON-CONSUMING CENTER.

Lille is not what may be called a cotton market and has no cotton exchange. Cotton is bought from local agents representing Havre and Liverpool firms. The United States exporter of cotton can scarcely, therefore, be aware of the importance of Lille as a cotton-consuming center. This is also the case as regards the importer of textiles and cotton fabrics. Importing houses generally buy their goods from commission houses situated outside of this

district. Commission houses can not cope in prices with manufacturers. United States merchants should bear this in mind and endeavor to deal directly with the manufacturers. While these facts may be of serious consideration for American importers of fabrics and exporters of cotton, they affect Lille very little as to its consumption of cotton.

COTTON IMPORTS OF FRANCE.

The city of Lille, together with the cities of Roubaix and Tourcoing, consume almost all the cotton imported into France. The following table gives a summary of the quantity of cotton imported and consumed in France for the last fifty years:

Year.	Imports.	Consump- tion.	Year.	Imports.	Consump- tion.
	<i>Pounds.</i>	<i>Pounds.</i>		<i>Pounds.</i>	<i>Pounds.</i>
1850.....	171,640,000	118,932,000	1890.....	312,710,000	293,478,000
1860.....	278,798,000	247,404,000	1892.....	421,196,000	404,178,000
1862.....	92,582,000	76,662,000	1894.....	388,688,000	373,039,000
1866.....	267,598,000	240,072,000	1896..	335,953,554	324,234,462
1870.....	213,538,000	202,000,000	1897.....	450,421,900	432,912,706
1875.....	287,131,000	270,000,000	1898.....	420,408,080	403,224,098
1880.....	302,276,000	262,232,000	1899.....	406,000,000	389,574,000
1885.....	283,862,000	263,556,000	1900.....	386,800,000	358,334,000

The foregoing figures denote a steady development of the cotton industry of France. The causes which brought about this progress were protective laws and the excellent situation of the chief industrial centers—Lille, for example. Up to 1850, and long after, the energy of the people was mostly directed toward flax spinning; but the high tariff of 1860 enabled the cotton industry to gain a prominent place among the industries of France. The decrease in importation and consumption of cotton between 1860 and 1862 was due to the civil war in the United States.

SOURCES OF COTTON SUPPLY.

The condition of affairs in the United States must at all times affect the textile industries of France—at least for fabrics, of which cotton is a component part. This is readily seen by the following comparison between the different cotton-growing countries exporting that material to France:

Year.	United States.*	Egypt.	India.	Turkey in Asia.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1889.....	200,098,260	.....	71,162,000	.....
1890.....	213,000,000	23,467,950	.....	424,400
1892.....	250,000,000	25,203,038	65,739,408	.....
1895.....	.....	25,683,000	.....	636,696
1896.....	230,000,000	37,535,652	.....	.....
1898.....	421,018,931	.....	19,902,400	.....
1900.....	320,000,000	37,000,000	8,000,000	.....

* The official returns of the Bureau of Statistics show that the exports of cotton from the United States to France were considerably greater than the figures given by Consular Agent King as the imports into France from the United States during the years 1892, 1895, 1896, and 1900, as will be seen by the following statement:

Year.	Exports from United States to France.	Imports into France from United States.
	<i>Pounds.</i>	<i>Pounds.</i>
1892	346,392,302	250,000,000
1895	395,349,541	.....
1896	239,132,586	230,000,000
1900	368,046,012	320,000,000
Total.....	1,348,920,441	800,000,000

These figures show that 548,920,441 pounds of cotton were exported from the United States to France during those four years which were not credited to the United States in the French import returns, for it is assumed that Consular Agent King compiled his table from French official returns.

As a complement to the foregoing figures it may be well to show the relative position of France in the consumption of cotton to the other cotton-consuming countries of the world.

The statistics of 1900 give the following results:

Country.	Spindles.	Consumption.
	<i>Number.</i>	<i>Bales.</i>
Great Britain.....	45,400,000	3,334,000
United States.....	19,100,000	3,787,000
Germany.....	8,200,000	4,576,000
Russia	7,200,000	
France.....	5,500,000	
Other European countries.....	12,100,000	
India.....	4,945,000	1,050,000
China, Korea, and Japan.....	2,500,000	1,600,000
Total.....	104,945,000	14,356,000

FRENCH VS. UNITED STATES COTTON-SPINNING INDUSTRIES.

The continued development of cotton spinning in the United States is the principal and most serious drawback to that industry in France. The present crisis, which is already causing important losses, is only a forerunner of the probable downfall of the cotton

industry of France. Prominent cotton spinners of this district fully comprehend the situation. Societies and syndicates have been formed to encourage cotton growing in the French colonies. In the meantime, the most important and prosperous cotton mill of Lille and environs has been sold to an English syndicate, which is endeavoring to monopolize all spun cotton.

It is not in the least surprising that such a view of the situation should obtain and that such action should be taken in France when we consider that in 1900 the United States produced 9,997,000 bales of cotton, of which 3,787,000 bales were consumed at home. The remainder, or 6,210,000 bales, added to what was furnished by India, was offered to the rest of the world for consumption.

The statistics which follow show the quantities of cotton produced, consumed, and offered to other countries in 1900 by the cotton-growing countries:

Country.	Production.	Consumption.	Exports.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
United States.....	9,997,000	3,787,000	6,210,000
India	2,323,000	1,059,000	1,264,000
China, Korea, and Japan.....			1,600,000
Total			9,074,000

This statement clearly indicates that while Great Britain may be supplied from India the other countries must look to the United States for raw material. This is particularly true with regard to France.

In the event of the United States increasing its consumption of cotton, France must put aside cotton spinning. The United States, by the force of circumstances, will become the first cotton-spinning nation of the world. The future for the United States cotton industry appears extraordinarily bright and assuring. The energy and attention of the American people should be directed toward realizing this anticipated preponderance of the United States in cotton fabrics and textiles. Few difficulties are to be surmounted. Capital is always at hand and statistics show sufficient material; for in 1900, as compared with other cotton-growing countries, the United States produced the largest percentage, as shown in the following table:

Country.	Percent- age.	Production.
		<i>Bales.</i>
United States.....	62	9,997,000
India.....	14	2,323,000
Egypt.....	9	1,427,000
Central Asia.....	5	898,000
China, Korea, and Japan.....	10	1,600,000
Total.....	100	16,245,000

COTTON SPINDLES IN FRANCE.

Notwithstanding these existing conditions, France, and especially the district of Lille, has made an excellent record in the cotton industry.

In 1801 the whole of France counted but 3,000 spindles, and these were located at Lille. An idea of the progress made may be obtained from the following data:

Number of spindles in operation in France.

Year.	All France.	Lille and other cities of the North.
1801	3,000	3,000
1849	3,600,000	470,000
1853	4,500,000	690,000
1859	5,400,000	793,916
1869	6,000,000	747,226
1878	4,600,000	810,000
1896	5,400,000	1,009,200
1899	5,500,000	1,824,000
1900-1912		2,000,000

The statistics for 1903 give the Department du Nord 2,027,000 spindles in full activity, with 4,500 idle. As for cotton twisting or cabling, there are at Lille 373,000 machines, at Roubaix-Tourcoing 101,524, and at Armentières 6,120. According to an authority on cotton spinning the following figures state approximately the present number of spindles now in operation in the Department du Nord: Cotton-spinning mills, 71; twisting or cabling, 64; weaving, 12; spindles for threading in activity, 2,187,820; spindles idle, 100,000.

The production of the cotton mills of France may be estimated at 251,000,000 pounds yearly. This would give to every spindle an average production of about 48 pounds, taking into consideration that there are 5,500,000 spindles in France. Such an average is, however, more or less inexact, as mills producing fine threads give less results than those spinning heavier grades.

IMPORTS AND EXPORTS OF COTTON YARN.

The production of cotton yarn in France is not sufficient to supply the demands. England supplies the deficit.

The importation and exportation of yarn are shown in the following statements:

Year.	Imports.	Exports.
	<i>Pounds.</i>	<i>Pounds.</i>
1893	7,628,600	2,136,000
1895	7,179,200	1,670,000
1897	4,872,400	1,690,000
1899	4,660,000	4,394,000
1900	9,017,008	3,318,000
1901	6,500,000	.....
1902	4,000,000	.....

England has always had an excellent market in France for her cotton yarns, and is able to undersell French manufacturers. This is due to the heavy cost of production in France.

COST OF ESTABLISHING AND RUNNING COTTON-SPINNING MILLS.

Mr. Alcan, a French authority on cotton mills, has calculated that the cost of establishing a cotton-spinning plant in France is about 54.69 francs (\$10.56) per spindle. This price includes spindle, motor, transmission, accessories, factory, heating and lighting, and real estate, viz: Spindle, 28.53 francs (\$5.50); motor, 9 francs (\$1.74); transmission, 1.80 francs (35 cents); accessories, 1.50 francs (29 cents); heating, etc., 1.90 francs (37 cents); building, 11.66 francs (\$2.25); real estate, 30 centimes (6 cents)—total, 54.69 francs (\$10.56).

Added to these preliminary expenses the annual cost of production is to be met by the manufacturer. Under the heading of this account come the interest and sinking of the capital engaged, fuel, etc., hand labor, and general expenses.

The annual cost of running spindles is summed up as follows by Mr. Hudouy, of Lille, Mill A costing 1,336,300 francs (\$257,906); Mill B, 161,200 francs (\$31,114); cost of Mill C not given:

Description.	Mill A (28,000 spindles; yarn No. 28).		Mill B (26,208 spindles; yarns Nos. 27-28 and 36-38).		Mill C (16,000 spindles; yarn No. 28, combed).	
	<i>Francs.</i>		<i>Francs.</i>		<i>Francs.</i>	
Interest	5.20	\$1.004	6.20	\$1.196	11.12	\$2.146
Fuel.....	1.22	.235	1.52	.293	3.12	.60
Labor	4.42	.853	5.53	1.067	11.85	2.287
General	3.51	.677	6.19	1.105	15.53	2.997
Total	14.35	2.769	19.44	3.751	41.62	8.03

In addition to the above, we should take into account the cost of raw material, waste of same, and the making of the thread or yarn. This is, however, rather difficult to ascertain, as the price of cotton is variable and the quantity of waste is more or less important with respect to fine or coarse numbers. The average outlay for producing about 2 pounds of cotton yarn or thread is as follows: Mill A, 14 cents; Mill B, 12½ cents; Mill C, 22½ cents.

These expenses do not include the cost of cotton nor waste of same. They comprise hand labor and simply running charges. To arrive at the profits of the manufacturer it is necessary to take the market value, deduct therefrom the above charges, the price of cotton, and waste of same. This would necessitate a longer report and demand more time. A part of the data is, however, at hand.

The yearly production by and according to the different numbers is as follows, per spindle:

No.	Pounds.	No.	Pounds.	No.	Pounds.
24	54	80	9	150	3½
30	37	90	7	160	3¼
35	31	100	6½	170	3
40	25	110	5½	180	2¾
50	18	120	5	190	2¼
60	14	130	5	200	2
70	11	140	4½		

According to the foregoing estimate, 1,000 spindles of No. 35 yarn give an annual production of about 31,000 pounds.

The looms and cotton machinery used in the different cotton mills of the North and in France generally come from England. The city of Lille counts at least fifteen English agencies for cotton-mill supplies. The only American cotton machine which has had any success here is the Northrop loom. This loom is also being manufactured in France.

LABOR AND WAGES.

The annual production, wages, and condition of the workmen employed in the cotton mills of Lille vary according to the location and importance of the plant.

It has been estimated that the yearly production of a workman is proportionate to the number of spindles under his care and the numbers of the threads spun. As a rule, 1,000 spindles demand six to seven workmen, and, running off No. 40 thread, have an output of 25,000 pounds a year; consequently, one workman produces 4,166 pounds of thread yearly. While 1,000 spindles drawing out No. 40 thread require six to seven workmen, four to five men would be

capable of attending to the same number of spindles running off the coarse numbers.

Wages in the cotton mills of Lille are much higher than in any other part of France, excepting in Armentières, a suburban town of Lille. The cotton mills of Lille pay men from 2 to 7 francs (38.6 cents to \$1.35) per day; women, 1.75 to 3 francs (33.8 to 60 cents); children, 1 to 2 francs (19.3 to 38.6 cents). The average, therefore, for men would be 3.90 francs (75 cents); for women and girls over 18 years of age, 2.55 francs (49.2 cents); and for boys and girls, 1.50 francs (29 cents). Admitting that there are three hundred working-days in one year, men average yearly 1,170 francs (\$225.81), women 765 francs (\$147.65), and children 450 francs (\$86.85). There are about 18,000 men, women, and children employed in the cotton industry in the Department du Nord, statistics of which are as follows:

Employees.	Number.	Total annual wages.	
		Francs.	
Men.....	6,400	7,488,000	\$1,445,184
Women.....	6,900	5,278,500	1,017,405
Children	4,700	2,115,000	408,195
Total.....	18,000	14,881,500	2,870,784

The annual expenditure, therefore, for hand labor in the cotton mills of the Department du Nord is \$2,870,784.

The daily wages of employees, according to occupation, are:

Blending and beating.....	\$0. 44 to \$0. 70
Carding, etc.....	. 32 to . 92
Preparing for looms (done chiefly by children and women).....	. 29 to . 48
Spinners .....	. 49 to . 98
Overseers	1. 05 to 1. 35

COTTON SPINDLES OF THE WORLD.

The following statement shows the number of cotton spindles in the several countries in 1870 and 1900:

Country.	1870.	1900.
Austria	1,520,000	3,140,000
Belgium	500,000	889,000
China		525,000
England	33,000,000	45,400,000
France.....	4,500,000	5,500,000
Germany.....	3,000,000	8,000,000
Holland.....	200,000	400,000
India.....	332,000	4,945,000
Italy	500,000	2,092,000
Japan	580,000	1,625,000
Norway and Sweden.....		350,000
Russia	2,000,000	8,000,000
Spain	1,500,000	2,615,000
Switzerland.....	1,600,000	1,710,000
United States.....	7,114,000	19,100,000
All other countries.....		653,000
Total.....	56,346,000	104,954,000

C. J. KING, *Consular Agent.*

LILLE, FRANCE, *July 10, 1903.*

WORLD'S CONSUMPTION AND PRODUCTION OF COTTON.

The following table, compiled by Latham, Alexander & Co., New York, shows the world's total consumption of cotton from 1884-85 to 1902-3, inclusive:

World's consumption of cotton.

Year.	Europe.			United States.			East In- dies.	Japan.	All other countries.	Total.
	Great Britain.	Continent.	Total.	North.	South.	Total.				
1884-85.....	Bales.* 2,746,000	Bales.* 2,604,000	Bales.* 5,350,000	Bales.* 1,286,000	Bales.* 241,000	Bales.* 1,527,000	Bales.* 467,000	Bales.* 100,000		Bales.* 7,444,000
1885-86.....	2,902,000	2,772,000	5,674,000	1,512,000	310,000	1,822,000	504,000	120,000		8,120,000
1886-87.....	2,955,000	2,912,000	5,867,000	1,578,000	361,000	1,939,000	569,000	130,000		8,505,000
1887-88.....	3,073,000	3,037,000	6,110,000	1,624,000	400,000	2,024,000	617,000	140,000		8,891,000
1888-89.....	3,016,000	3,256,000	6,272,000	1,704,000	444,000	2,148,000	697,000	150,000		9,267,000
1889-90.....	3,227,000	3,432,000	6,659,000	1,682,000	503,000	2,185,000	791,000	160,000		9,795,000
Average for 6 years.....	2,986,000	3,002,000	5,988,000	1,564,000	377,000	1,941,000	607,000	134,000		8,670,000
1890-91.....	3,384,000	3,631,000	7,015,000	1,810,000	557,000	2,367,000	924,000	99,000	106,000	10,511,000
1891-92.....	3,181,000	3,619,000	6,800,000	1,944,000	632,000	2,576,000	914,000	150,000	125,000	10,565,000
1892-93.....	2,866,000	3,661,000	6,527,000	1,872,000	679,000	2,551,000	918,000	200,000	195,000	10,291,000
1893-94.....	3,233,000	3,827,000	7,060,000	1,593,000	671,000	2,264,000	959,000	192,000	105,000	10,580,000
1894-95.....	3,250,000	4,030,000	7,280,000	1,940,000	803,000	2,743,000	1,074,000	286,000	160,000	11,543,000
1895-96.....	3,276,000	4,160,000	7,436,000	1,711,000	861,000	2,572,000	1,105,000	363,000	129,000	11,605,000
Average for 6 years.....	3,198,000	3,821,000	7,019,000	1,812,000	700,000	2,512,000	983,000	215,000	120,000	10,849,000
1896-97.....	3,224,000	4,368,000	7,592,000	1,776,000	962,000	2,738,000	1,004,000	414,000	132,000	11,880,000
1897-98.....	3,432,000	4,628,000	8,060,000	1,808,000	1,154,000	2,962,000	1,141,000	534,000	191,000	12,888,000
1898-99.....	3,519,000	4,784,000	8,303,000	2,244,000	1,309,000	3,553,000	1,314,000	703,000	142,000	14,015,000
1899-1900.....	3,334,000	4,576,000	7,910,000	2,355,000	1,501,000	3,856,000	1,139,000	711,000	157,000	13,773,000
1900-1901.....	3,269,000	4,576,000	7,845,000	2,150,000	1,577,000	3,727,000	1,060,000	632,000	152,000	13,416,000
1901-2.....	3,253,000	4,836,000	8,089,000	2,207,000	1,830,000	4,037,000	1,384,000	726,000	179,000	14,415,000
Average for 6 years.....	3,339,000	4,628,000	7,967,000	2,089,000	1,389,000	3,478,000	1,171,000	620,000	159,000	13,398,000
1902-3.....	3,200,000	5,096,000	8,296,000	2,048,000	1,967,000	4,015,000	1,400,000	439,000	202,000	14,352,000

* Bales of 500 pounds each.

COTTON SUPPLY AND DISTRIBUTION.

In connection with the preceding table it is interesting to note the world's supply and distribution of cotton for the past three years:

Year.	Visible and estimated supply at beginning of year.	Crops.			Total actual consumption.	Surplus at end of year.	
		United States.	All others.	Total.		Visible.	Estimated.
	<i>Bales.*</i>	<i>Bales.*</i>	<i>Bales.*</i>	<i>Bales.*</i>	<i>Bales.*</i>	<i>Bales.*</i>	<i>Bales.*</i>
1900-1901	2,456,489	10,218,000	3,414,451	16,632,454	13,415,916	1,549,027	1,124,000
1901-2	2,673,027	10,380,380	4,033,569	14,413,949	14,414,908	1,306,068	1,366,000
1902-3	2,672,068	10,511,020	4,140,680	14,651,700	14,351,930	1,151,285	1,820,553

* Bales of 500 pounds.

COTTON AND COTTON-GOODS STATISTICS FOR THE UNITED STATES.

The United States exports of cotton and cotton manufactures for the years 1901-1903 were as follows:

Classification.	1901.	1902.	1903.
Manufactured	\$20,272,418	\$32,108,362	\$32,216,304
Unmanufactured	317,816,429	284,279,190	310,635,370

The following table, compiled from reports of the Twelfth Census, shows the number of establishments, capital, and value of products of cotton manufactures in the United States from 1840 to 1900, inclusive, by decades. The figures for 1900 do not include the manufacture of cotton small wares, of which there are 82 establishments with a capital of \$6,397,385 and a total production valued at \$6,394,164.

Year.	Number of establishments.	Capital.	Value of products.
1840.....	1,240	\$51,102,359	\$46,350,453
1850.....	1,094	74,500,931	61,869,184
1860.....	1,091	98,585,269	115,681,774
1870.....	956	140,706,291	177,489,739
1880.....	756	208,280,346	192,090,110
1890.....	905	354,020,843	267,981,724
1900.....	973	460,842,772	332,806,156

The table following gives the value of domestic products, exports, domestic consumption, imports for consumption, and total consumption, with per cent of imports to total consumption, in 1870 and 1900:

Description.	1900.	1870.
Value of domestic products.....	\$339,200,320	\$177,489,739
Exports	\$24,003,087	\$3,787,282
Domestic consumption.....	\$315,197,233	\$173,702,457
Imports for consumption.....	\$39,789,989	\$21,899,120
Total consumption.....	\$354,987,222	\$195,601,577
Per cent of imports to total consumption.....	11.2	11.2

The above table shows the remarkable fact that though the total consumption of cotton manufactures almost doubled from 1870 to 1900, yet the imports for consumption kept pace with the increase, the percentage of the imports for consumption to the total consumption for each date, 1870 and 1900, being the same—11.2.

The following table, compiled from the United States census report of 1900, shows the status of cotton manufacture in the United States in 1880, 1890, and 1900. The figures do not include the returns of mills manufacturing webbing, tapes, hosiery, mixed goods, or fabrics, which are not classed as specific manufactures of cotton.

Description.	1880.	1890.	1900.
Mills .....number...	756	905	1,055
Capital employed.....	\$208,280,346	\$354,020,843	\$467,240,157
Spindles.....number...	10,653,435	14,188,103	19,050,952
Looms .....do.....	225,759	324,866	455,752
Cotton consumed.....bales...	1,570,344	2,261,600	3,646,708
Operators .....number...	174,659	221,585	307,763
Amount paid for wages.....	\$42,040,510	\$69,489,272	\$94,039,951
Cost of cotton consumed.....	\$86,945,725	\$117,392,576	\$125,169,616
Value of production.....	\$192,090,110	\$267,981,724	\$339,200,320

The average number of pounds of cotton consumed per spindle during the above periods was as follows:

	Pounds.
1880.....	70.43
1890.....	78.79
1900.....	95.43

THE WORLD'S COTTON SPINDLES.

The following table, compiled by Latham, Alexander & Co., shows the number of spindles in the principal countries of the world and total in the world during the past five years:

Country.	1903.	1902.	1901.	1900.	1899.
Great Britain.....	47,200,000	47,000,000	46,100,000	45,600,000	45,400,000
Continent	34,000,000	33,900,000	33,350,000	33,000,000	32,500,000
Total Europe.....	81,200,000	80,900,000	79,450,000	78,600,000	77,900,000
United States:					
North	15,200,000	15,150,000	15,050,000	14,500,000	14,290,000
South	7,039,633	6,408,974	5,819,835	4,540,515	3,987,735
Total United States.....	22,239,633	21,558,974	20,869,835	19,130,515	18,277,735
East Indies.....	5,100,000	5,006,965	5,006,936	4,945,783	4,728,333
Japan	1,450,000	1,400,000	1,250,000	1,220,975	1,187,159
China	600,000	600,000	600,000	600,000	600,000
Total India, etc.....	7,150,000	7,006,965	6,856,936	6,766,758	6,515,492
Canada	700,000	690,000	680,000	670,000	638,212
Mexico.....	500,000	500,000	500,000	500,000	491,000
Total Canada and Mexico.....	1,200,000	1,190,000	1,180,000	1,170,000	1,129,212
Total world.....	111,789,633	110,655,939	108,756,771	105,667,273	103,822,439

HOW TO ENLARGE TRADE IN SOUTH AFRICA.

(From United States Consul Bigham, Cape Town, Cape Colony.)

AGRICULTURAL IMPLEMENTS.

I wish to emphasize in the strongest terms the necessity which exists for good American representatives to introduce our products into South Africa. The inroads being made in the trade of this colony by American agricultural implements and the fact that the South African farmer recognizes their excellence and will have them if he can secure them reasonably has excited a good deal of jealousy in the minds of the British merchants here. The mere fact of a British brand on an implement or machine will not capture the farmers here. They want the best regardless of where it is manufactured. As I do not live in an agricultural district I am not able to say to what extent the different agricultural implements could be sold, but I am told the American hand and sulky plows are very much admired by farmers in the Orange River Colony and Natal, and I am safe in saying that the only requirement to make them popular is a proper introduction by an intelligent American salesman. It is of little use to try to introduce complicated machinery by selling them on mail orders to the British merchant here, who does not understand how to manipulate them or demonstrate their good

qualities, which should be done by the expert salesman. Stock must be kept on hand here.

I give the names of the leading importers of machinery and implements in Cape Town:

R. M. Ross & Co., Strand street.
 Lloyds & Co., 40 Burg street.
 White, Ryan & Co., 18 Burg street.
 Geo. Findlay & Co., Spin street and Boom street.
 L. H. Twentyman & Co., 18 Burg street.
 De Wall & Co., 18 Burg street.

The following is a list of goods of American manufacture which should be on the market here:

Automobiles.	Fencing wire, woven and	Pumps, force and iron.
Axles, wagon and carriage.	other.	Phaetons.
Binder twine.	Harrows.	Plumber's supplies.
Buggies.	Horsepowers.	Reapers.
Binder sickles.	Hayrakes.	Scales.
Binder sections.	Harrows, spring, disk, spade, etc.	Surreys.
Binder guards and guard plates.	Harness.	Shovels and spades.
Binders, grain.	Lawn swings.	Scoops.
Belting, leather.	Link belting, detachable.	Spring wagons and carriages.
Cultivators.	Locomotives.	Scythes.
Corn planters, hand and other.	Mower knives.	Steel tanks.
Carriages.	Machinery: Harvesting, mower sections, mowers, grain-seeding, flour-mill, brickmaking, refrigerator, thrashing, and fence-making.	Umbrellas.
Castings, malleable.		Warehouse trucks.
Carts.		Wheel scrapers.
Cornshellers, hand.		Windmills, and towers and regulators.
Drills, seed, grain, and corn.	Metal wheels.	Wagons, spring, express, freight, and road.
Delivery vans.	Plow blades.	Wheelbarrows.
Engines, traction and other.	Plows, wheel and walking, gang, sulky, and shovel.	Well-drilling machines and tools.
Farm trucks.		Wheels, carriage.

W. R. BIGHAM, *Consul-General*.

CAPE TOWN, CAPE COLONY, *September 29, 1903.*

OPENINGS FOR AMERICAN TRADE IN AFRICA.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

EGYPT.

In a report lately published in the DAILY CONSULAR REPORTS I urged our exporters to give their attention to Egypt as a market for the sale of American products.

The annexed statement shows the countries which supply Egypt

with articles of iron and steel. The value of the imports of these into Egypt from the following countries for the year 1902 were:

England.....	\$1, 001, 516
Belgium.....	592, 217
Germany	180, 300
France	51, 470
Sweden	3, 809
Austria-Hungary	578
United States.....	128

Not a very creditable showing for the United States.

TRANSVAAL.

The city of Johannesburg, South Africa, is about to build a drainage system and has voted an expenditure of £500,000 (\$2,433,250) for that purpose. This offers a good opportunity for the sale of pipes and toilet and bathroom accessories, in the production of which Americans excel. The only competitors of note which the United States has in this line are the English, and their products do not equal the American products.

It is to be regretted that our novelties and improved productions in the plumbers' trade, so greatly superior to those of any other country, are not known in the Old World, where improvements in building, especially in sanitary arrangements, are steadily advancing. In this regard a favorable opening in the cities of South Africa is presented to our manufacturers and contractors.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 20, 1903.*

AMERICAN AGENTS IN FOREIGN COUNTRIES.

(From United States Consul Halstead, Birmingham, England.)

Having occasion to write to an American manufacturing company and not knowing the address of the London agency, I suggested that, though it might not seem worth while sending their London address to consuls, it might pay them, as they advertised extensively in American magazines, to insert the address of their London agency in their advertisements in such magazines as have a good sale in this country, and when advertising a special article quoting prices to give the prices in English money. Upon receipt of my letter this American concern wrote:

We beg to thank you for your information in regard to American magazines and their circulation in England, and are calling the attention of our London manager to this matter.

The London agent wrote me a letter which indicated that the communication he had received from his firm had puzzled him greatly. Replying to the agent's letter, I wrote:

I have only to say that I suggested to your home office that the several American magazines which are sold somewhat extensively in this market should have at the bottom of their American advertisements the address of the English agent of advertisers and quoted prices should be in English money, and having read my letter carelessly your home concern wrote me that they had "called their English department's attention to the matter;" but as the advertisements are placed in magazines in the United States and by the home office, I have written them asking what good it would do them to call their English department's attention to the hint I had given them. This is but an instance of the many cases in which an American consul finds it difficult to be of assistance to the manufacturers of his country.

The London agent, in reply, said he was taking up the matter with the home firm, asking them to include his address in their advertisements, and intimated that my letter would assist him in getting them to do so. He concluded his letter as follows:

I have for many years been with our company and am constantly exerting my best efforts on behalf of their export business, which I am sorry to say so few American manufacturers understand; but I have no doubt the time will come when they will pay closer attention to the requirements of foreign trade.

MARSHAL HALSTEAD, *Consul.*

BIRMINGHAM, ENGLAND, *September 29, 1903.*

SUGGESTIONS TO EXPORTERS TO SOUTH AMERICA.

(From United States Consul Monaghan, Chemnitz, Germany.)

BRAZIL.

Not long ago the German consul at Rio de Janeiro sent his Government a report which contains facts of value to American exporters. German houses located at Rio de Janeiro are criticised for not confining their lines of commodities to goods of German manufacture, instead of handling English, French, American, or other goods without discrimination, if they prove profitable to the Brazilian trade. In this way American exporters have been favored with some of their marketable goods and lifted up to a position where they have been able to establish themselves on an independent footing in Rio de Janeiro.

The above contains a good suggestion for American exporters to South America, if they are not already familiar with this practice of the German houses, as there are probably numerous small articles appropriate for South American trade which could be exploited to advantage by a German house, but for which the trade

would not assume sufficient proportions to warrant the dispatch of a special agent into the field to develop it. Certain German houses dealing in stationery have thus done a fine business in foreign brands of ink.

In order to establish such communication with a German house, it is necessary to know something about its trade methods, as well as to inquire into the lines of goods carried by different houses established in the country. Such information can be obtained, it is claimed, by applying to a reputable information bureau, a Rio de Janeiro house by the name of A. Confianca, Caixa 1265, which is reported to correspond in a number of modern languages, including German and English. The fees exacted by this firm are said to be 15 milreis (\$8.19) for information supplied in regard to any single matter pertaining to the locality, or within the city, and 20 milreis (\$10.90) for information which must be drawn from sources outside of the city in other parts of Brazil. Certain German houses in Rio de Janeiro are also reported to supply information at from 5 to 20 marks (\$1.19 to \$4.76) per single subject. One such firm is J. P. Roth, Rua Alfandega 38.

Great circumspection is said to be necessary in dealing with Brazilian houses (native) on a credit basis. Not only is it impossible to avoid contact with unreliable firms and agents who indulge in sharp and questionable business practice, but the bankruptcy laws are reported to be far from perfect. As they stand at present, disreputable houses are enabled to throw up their hands in apparent bankruptcy and then escape all responsibility of settlement with the creditors through the numerous loopholes offered by the application of the law.

COLOMBIA.

The experience of exporters dealing with Colombia also comes as additional evidence of the discouraging credit conditions existing there. Every inch of ground must be investigated. It is said to be a very general practice with some young merchants and agents to send to American and European exporters for samples of textile goods, such as hosiery, gloves, shawls, clothes, etc., under the guise of desiring to enter into trade relations, and then refuse to pay for them, or show any further signs of existence to the men whom they have swindled. Sometimes these schemers have been able to clothe their activities with such an air of plausibility and integrity that shipments of goods were even made on the strength of their representations, of course to the ultimate loss of the shipper. It is a well-known fact that the German exporters are probably more ready to grant credit, and deal on a liberal basis with comparative strangers, than any other merchants of the world. This policy

frequently brings them business where others fail, as was so well shown in case of Russia. It also exposes them to heavier losses, which, it seems, are in the long run more than compensated for by the profits received. While this practice of dealing on a liberal credit basis has brought considerable business to Germany, and seems to receive a general recognition and support, the warnings to German business men to investigate thoroughly before granting credit are being sounded more and more frequently. German consular representatives write on this subject continually, and none more than those who are located in the far-distant markets and whose unpleasant duty it is to interest themselves in the enforcement of the numerous claims presented by German exporters who have suffered at the hands of unscrupulous buyers.

On the other hand, American exporters have no cause for looking at the distant markets askance, as the opportunities there are probably greatest. It is virgin soil that yields the richest returns. Only it must ever be remembered that it is necessary to investigate just where the stumps and stones lie to preserve the machinery and prevent ruin. Having done that, it seems as though no markets are more lucrative than those which are in a state of development, as are all the distant markets.

PERU.

It may not have come to the knowledge of some of our exporters that the city of Lima has among its numerous public buildings a large structure that is the seat of a most practical organization for the promotion of foreign trade, viz, the "Permanent Exposition of Machinery and Manufactured Products" (*Exposicion Permanente de Maquinarias y Manufactura*). This exposition was founded in 1897 by the Peruvian Government, and is at present supervised and managed by a regular Government official. Within the tremendously big hall are exhibited the leading products of Peru and countless cases of Peruvian manufactures. But the exhibits are not confined to that country alone; they include the machines and manufactures of many countries. The purpose of the organization is to demonstrate the development of the Peruvian industries, as well as to give foreign manufacturers an opportunity to exhibit their commodities and bid for the patronage of the Peruvian buyers.

The exposition is open to the public and is well patronized. Among its most frequent visitors are the large planters from the plantations of the vicinity who come to the place to view the latest exhibits in agricultural machinery. The Government charges nothing for floor space and admits all exhibits into the country free of all duties for the period of six months. Bonds must, however, be given for the ultimate payment of the duty in case the exhibits

are finally sold. From these extremely favorable arrangements for the exhibitor it will be seen that the only charges which fall to the lot of the foreign exhibitor are transportation and the cost of erecting the machinery or placing the exhibit.

It is hardly necessary to point out to American manufacturers the wonderful opportunity offered by this Government exposition to bring American machinery and American manufactured products to the attention of Peruvian buyers. It is reported by a German consular representative that probably most attention is given to agricultural machinery, which is sought on all sides by the great plantation owners. However, smaller articles of trade are also being exhibited. It will be seen that the expense of sending a small package containing late mechanical devices, dress goods, or household articles adapted to the needs of Peruvian life will be inconsiderable in the light of market opportunities which may be developed there.

The Government conferred upon the management of the exposition the privilege of selling exhibits on commission. Where foreign houses which have no branches in Peru desire to introduce their commodities into the country it is said to be wisest to engage a good agent who is familiar with the economic peculiarities of Peru, as most sales would have to be made on credit, if they are to be made at all, and the purchasing power of the buying class fluctuates considerably with the prosperity of Peru's leading industries—copper mining, sugar cultivation, and cotton growing, all of which are articles of importance in the world markets and hence subject to the frequent fluctuations in price that characterize commodities of universal demand manipulated by eccentric speculation.

J. F. MONAGHAN, *Consul*.

CHEMNITZ, GERMANY, *November 20, 1903.*

AMERICAN SHOES IN GERMANY.

German shoe and leather trade papers are urging Germans to look out for the American "evil," to watch and emulate American enterprise in winning its way into the world's markets. Schuh und Leder, a trade paper published in Berlin, calls attention to the excellent report of Consular-General Mason published in ADVANCE SHEETS No. 1733 (August 26, 1903). The trade papers have pooh-poohed the efforts of Mr. Mason and United States consuls in general. Schuh und Leder publishes Mr. Mason's report on "American shoes in Germany." The paper tries to belittle the efforts already made by contrasting Mr. Barthman's business, referred to by Mr.

Mason, with the Empire's total shoe imports, which it says were only 811,000 marks (\$193,018). "If," it continues, "we take 12 marks (\$2.86) per pair as the price paid by Mr. Barthman for his shoes"—parenthetically, it says he sells them at the uniform price of 18 marks, or \$4.28, per pair—"his total of 53,500 pairs must have cost him 612,000 marks (\$145,656), leaving only 169,000 marks' (\$40,428) worth imported by all the other dealers in Germany." In the next paragraph Schuh und Leder shows intelligent interest in expositions. It tells its readers to take their wares, if not to St. Louis in 1904, at least to Berlin, where the Empire's shoe dealers propose to open an exposition of German shoes, boots, and all kinds of foot wear. It thinks such an exposition would help German manufacturers to secure markets in Austria, Hungary, Scandinavia, Switzerland, and the Netherlands.

In a column article the Leipziger Tageblatt, quoting the Schuh und Leder Zeitung (Shoe and Leather Journal), takes up the same question and tries to explain away the work of Mr. Barthman and the efforts of American consuls to secure the introduction of American shoes into the Empire. It tells the German shoe dealers to show by deeds rather than by words that they can hold their own at home and abroad against the most intelligent of all their rivals. It says the Empire, during the last five years, has witnessed the efforts of Americans to secure a firm foothold for the sale of their foot wear in Berlin, Hamburg, Dresden, Munich, Vienna, and all the large German cities. A certain amount of anxiety was justly felt by those who had to meet the invasion. Methods by which it might be successfully met were proposed on all sides. The writer is not certain that the Government was not asked to come to the aid of the imperiled German industry, for it was and is imperiled. There should be no disposition to overestimate the Empire's ability. The Empire's product, from 20 factories—the largest of which employed more than 1,000 hands, the smallest not less than 200—is comparable with the best American wares. Germany's shoe shops must not think of resting upon their laurels; they must go forward and fight for a place in the world's markets. Up to the present the manufacturers have performed their part in the effort to keep out American competitors. It is time now for the merchants to act. These, as a rule, have done little to encourage the sale of American shoes. What they bought they used as samples to show that the American shoe was no better in fit, appearance, or in durability than the German. The only difference was in price, the American being much higher. The Americans, however, are not the men to allow themselves to be baffled or discouraged or to be easily turned from their efforts to attain an object or to carry out a purpose. American merchants are opening shops for the sale of American shoes in all parts of the Empire. The writer then refers

to Mr. Barthman's success in Berlin, Hamburg, and Frankfort. Mr. Bathman's phenomenal success has startled the Empire. For one firm to sell 53,500 pairs of shoes at 18 marks (\$4.28) a pair in twelve months is too important an industrial item to be passed over with a wave of an editorial wand. The editor refuses to discuss the question of Mr. Barthman's profits at \$4.28 a pair. (The duty on each pair entering the Empire is about 12 to 20 cents.)

The writer concludes his article as follows:

The only thing to be done is to appeal to the reason of the German people. The people must understand that German shoes are made by machinery manufactured in the United States. The most intelligent workers in American shoe factories are Germans. We have as good leather as the Americans. An example of this is box calf, the most modern of all upper leather. It was first introduced by White Brothers from the United States, but now better box calf is made in Germany. If the fashion of American shoes is praised, it must be remembered that the largest factory of lasts in the world is in a German district, which furnishes lasts to German factories all over the world and also to the United States.

This information must be kept before the people continually in the newspapers. The German shoe dealer must think that the German factory is the best in the world. He must make it known, also, in his show window. The American is not slow in putting before the world the merits of his wares, and the German must do likewise.

The American shoe store opened in Berlin is a very attractive place, where the "Vera" shoe, for men and women, can be bought for \$3.79. Branch stores have been opened in Hamburg, Breslau, Munich, Dresden, Cologne, Frankfort, and Hanover. The establishment of the Berlin business is such that its brilliant advertising can not be exceeded. It seems, however, that the wares are only ordinary and not worth the prices asked, which is not to be wondered at when one thinks of the cost of the luxurious display.

The total exports of boots and shoes from the United States to Germany during the past three years were as follows: In 1901, \$188,795; 1902, \$197,937; and 1903, \$337,093.

I prophesy yet greater surprises to the German shoe trade unless it is united for the purpose of fighting for its rights and existence.

AMERICAN BOOTS AND SHOES IN GREAT BRITAIN.

(From United States Consul McCunn, Dunfermline, Scotland.)

Nearly all the boot shops handle American boots and shoes to a greater or less extent, and other articles of American import carried by dealers generally throughout Scotland are usually to be had in the shops here.

While American boots and shoes are as popular as ever, and continue to hold the prominent place gained in the British market, it is likely to be but a question of time when the imports of boots and shoes from the United States must necessarily fall off, as British manufacturers are now turning out a class of boots and shoes in

style, finish, and quality like American-made boots and shoes. Retail boot shops even in the smaller towns are advertising boots made to order on American lasts. The new machinery and American lasts, which the British manufacturers were once so slow to adopt, are now enabling them to turn out an easy-fitting ready-made boot, in a variety of sizes, that in every way satisfies the wants of the trade.

A well-known extensive boot and shoe dealer in Scotland is credited with saying that out of \$6,000,000* worth of foot wear exported from the United States in 1902, \$2,000,000 worth came to the United Kingdom, \$1,000,000 worth went to Australasia, and \$500,000 worth to Canada.

Ten years ago Great Britain took only \$2,169 worth of boots and shoes from the United States; last year she took \$2,013,890 worth.

J. N. McCUNN, *Consul*.

DUNFERMLINE, SCOTLAND, *October 22, 1903.*

AMERICAN BOOTS AND SHOES IN NEW ZEALAND.

(From United States Consul Dillingham, Auckland, New Zealand.)

I have frequently called attention to the rapid growth of our boot and shoe trade in this colony, and trust that another reference to it will not be unwelcome to those interested in the subject in the United States. An Auckland member of the lower house of parliament, now in session at Wellington, recently asked the government whether it would ascertain if the statements in a copy of the Auckland Star were correct, which, succinctly stated, were that the boot and shoe making industry in New Zealand had been slowly declining for the last eight or ten years, and was at the present time in a very bad state, and that many of the factories were shortening the working week by three hours and naturally lowering the wages in consequence thereof; that this decline was mainly due to the quantities of prison-made work from America which were being shipped into the colonial market and capturing New Zealand's trade. The speaker said it was high time that the government took some notice of this condition of affairs and used its influence to alleviate the strain. The speaker stated that the work which was being showered on the colony was practically debarred in America in consequence of a law which forbade the sale of all prison-made work in the States; that if the government did not step in and do something in regard to the present condition of affairs, next winter would see much suffering in this

* The exact figures for 1902 were, as per the official publication of the Bureau of Statistics: Total exports, \$6,182,088; to the United Kingdom, \$2,013,890; Australasia, \$955,230; Canada, \$523,624. The exports of boots and shoes to the United Kingdom during the past six years were: In 1897, \$300,978; 1898, \$352,755; 1899, \$525,242; 1900, \$950,267; 1901, \$1,552,623; and 1902, \$2,013,890.

particular branch of trade, and the output, which should find a good local market, would be practically killed. The commissioner of trade and customs replied that upon inquiry made in Wellington no confirmation could be obtained of the alleged large importations of prison-made boots and shoes from the United States. He stated that the evidence was in fact to the contrary; that the invoices submitted throughout the colony were nearly all those of manufacturers. There were, however, one or two cases where New York agents had forwarded their own invoices to customers in the colony, and therefore it was the intention of the commissioner's department to require manufacturers' invoices to be produced in these cases, as it was only possible for prison-made goods to come through these agents.

The commissioner further stated that it would thus be seen that, considering the large importation, the proportion of prison-made goods was very small indeed, if any. Further, that the department had reliable information that only the heavier class of "nugget" boots is produced in prison, whereas it is well known that numerous factories produce daily thousands of pairs of boots at such prices as astonish all who see them. He called attention to the fact that a line of men's light boots produced in these factories is invoiced in America at 3s. 1d. (74 cents) per pair and retailed in New Zealand at 5s. 11d. (\$1.44) per pair. Apart from the question of prison labor, therefore, there is a very serious competition, as the commissioner stated, for the New Zealand manufacturers to meet. As the following return shows, the importation of boots and shoes is increasing:

Value of boots imported.

Country.	Quantity.	Value.	Average price per pair.
1898.	<i>Doz. pairs.</i>		
United Kingdom.....	58,722	\$547,475	\$0.75
Australia	1,838	22,395	1.05
United States.....	1,568	33,530	1.74
All other countries.....	1,096	8,455	.62
Total and average price.....	63,224	611,855	.79
1900.			
United Kingdom.....	67,715	626,315	.75
Australia	5,309	67,940	1.03
United States.....	10,602	213,230	1.62
All other countries.....	2,201	22,955	.85
Total and average price.....	85,827	930,440	.87
1902.			
United Kingdom.....	57,436	479,905	.66
Australia	3,043	43,405	1.15
United States.....	22,887	405,485	1.43
All other countries.....	3,937	27,225	.54
Total and average price.....	87,353	956,020	.89

The difference between the average price of the goods coming from the United Kingdom and from the United States is mainly accounted for by the fact that large quantities of slippers are included in the former. Whenever the tariff is revised the question of increasing the duty on boots and shoes will receive the serious consideration of the government. In fact, the premier has recently stated that an increase from 22½ per cent to 35 per cent ad valorem duty would be none too much on United States importations of foot wear.

F. DILLINGHAM, *Consul-General*.

AUCKLAND, NEW ZEALAND, *November 5, 1903.*

TRADE BETWEEN AUSTRIA-HUNGARY AND THE UNITED STATES.

(From United States Consul-General Rublee, Vienna, Austria.)

The volume of trade with the United States is not large. Austrian products are not sold in the United States to any great extent, though the trade seems brisker this year. On the other hand, Austria-Hungary is compelled to buy American cotton, but her consumption of other articles produced in the United States is somewhat limited. There is a considerable variety of American manufactured products sold in the Empire, but it can not be said that this sale is on a large scale. However, the outlook is encouraging. As compared with a few years ago the introduction of American goods has made great progress. The merits of a number of American products are now recognized, and there is a demand—to be sure, a limited demand—for certain commodities that promises to expand gradually. The policy of the Government and the inborn instinct of the people are to patronize home industries, so that when certain American articles make their way in spite of these obstacles it is a signal triumph. Such American goods as sell in Austria, and there is a large variety, though the sales of many are as yet insignificant, are generally admitted to be of superior quality. American goods are popular in spite of some effort to arouse prejudice against them. Thus, public speakers and writers do not hesitate to declaim from time to time on what they term the “American danger.” Eventually, these speakers allege, the large American producers will transfer part of their attention to Europe. This will result in the capture of the bulk of trade. One hears this occasionally alluded to as a possibility, and it is used as a bugbear against American trade.

Among the more prominent articles of American manufacture that now sell to some extent in Austria-Hungary may be mentioned

the following: Typewriting machines, boots and shoes, sewing machines, cash registers, tools and hardware, agricultural machinery, patent medicines, kodaks, fountain pens, phonographs, canned goods, novelties, etc. Most of these articles have been introduced with considerable success. American typewriting-machine manufacturers are largely represented in Vienna, as well as throughout the Empire, and their business has increased very much in the last few years. The agent of a popular machine informed me that he sells fifty machines now in the same time in which he sold one ten years ago. This indicates to what extent they have come into use in recent years. They are being generally introduced in public and private offices, and the increase in their sales is bound to be much larger in the near future. American cash registers are being adopted, too, an American company having opened a store in Vienna, which is doing a large business. In fact, wherever an American firm has a store of its own in this country the business develops in a satisfactory manner. A boot and shoe store, where only American-made foot gear will be sold, is to open December 1, and its success seems assured. Vienna is the center of the Austrian shoemaking industry and it is a significant event that a store should be opened where only American shoes will be sold.

American tools and hardware are well liked and have been introduced to some extent. Agricultural machinery of American make is recognized as the best, but the competition of Austrian, German, and English machinery is extremely keen, and it is difficult to meet the prices of such competition. American sewing machines find a fairly good market and there is a good opportunity for still further enlarging it. American medicinal preparations are to be seen in many drug stores now, and it is reported that they are becoming popular. Such manufactured products from the United States as already sell in Austria-Hungary and others not yet introduced may find a good market here. It is principally a question of getting the goods before the public, and as American manufacturers begin to study foreign markets and to acquaint themselves with the methods for doing business outside of their own country they should acquire a fair share of trade in Austria-Hungary.

W. A. RUBLEE, *Consul-General.*

VIENNA, AUSTRIA, *October 19, 1903.*

OUTLOOK FOR AMERICAN TRADE IN AUSTRIA.

(From United States Consul McFarland, Reichenberg, Austria.)

There seems to be no hostility on the part of the Austrian people to the introduction of American products of whatever character, if the opposition of the agrarians to the importation of food stuffs be excepted. On the contrary, superiority or improvement of method are quickly acknowledged. This would appear to make an easy market here for American goods, and a practical knowledge of local conditions is necessary to correct such an impression. In reality, it is an extremely difficult market to compass with satisfactory results. Vienna and Prague are the natural commercial and wholesale centers for Austria and Bohemia. The other numerous cities are comparatively small and their shops designed only for local trade. The immense relative population of Bohemia lies in the dorfs, or small villages, which stretch along the water courses in almost contiguous lines and in apparent disregard of transportation facilities. The shops in these villages, which supply daily necessities to the great bulk of the population, are insignificant affairs, buying in small quantities and to some extent from the traveling vans of town or city concerns. With wages of skilled workmen, as in the cut-glass trade, at a maximum of 70 cents a day, with girl and other female factory labor at from 20 to 40 cents, and with a peasantry that exists in the most primitive fashion, the purchasing capacity of the people, outside of the richer classes of the cities and towns, is restricted, and to reach what market there is requires a practical campaign based upon knowledge of local conditions.

The few importers in the cities, dealing chiefly with the well-to-do, are somewhat autocratic; the retailers, conservative and skeptical regarding direct importation. American trade seems to have drifted largely, therefore, into the hands of a set of wholesale or clearing agents, chiefly at Hamburg, and excessive middlemen's profits, added to heavy interior freight rates and the perplexities of the Austrian tariff, stand between the American exporter and the Austrian consumer. The consequence is that the retail prices of American wares, staples, and what are here termed "table luxuries" are unaccountably high and out of the reach of all except the very wealthy. The American exporter who can get into connection with substantial retail houses, either directly or through his own continental agency, and who will conform in his dealings to local commercial usages, should reap a decided advantage. In spite of obstacles, however, American products are becoming more and

more common, finding their way, by devious processes, even to the shelves of the smaller stores, and the pronounced German faculty of imitation is kept busy providing substitutes. Of 1,942 letters received and dispatched from this consulate during the year, as compared with 1,639 the previous year, the great majority related directly to the introduction or extension of American trade.

The low cost of labor is the great obstacle to the introduction of the heavier and costlier labor-saving machinery. When the saving in wage and increase of production would hardly meet interest account on increased investment, it is difficult to convince a manufacturer that it would benefit him to introduce modern machinery and throw out of employment the people who depend upon him for livelihood in their native dorfs and for whose welfare he has a genuine if somewhat selfish regard. Excepting for the introduction of a few Northrop looms, there appears to be no noticeable improvement of processes in the textile branches. It is the opinion of old observers that the supremacy of hand labor, water, and foot power will continue until gradual social development creates a higher standard of existence for the lower classes.

S. C. MCFARLAND, *Consul*.

REICHENBERG, AUSTRIA, *October 17, 1903.*

AMERICAN PRODUCTS IN LIEGE.

(From United States Consul McNally, Liege, Belgium.)

Liege stands to-day as one of the greatest industrial cities in Europe, and, while world-renowed for the quality of its firearms and gun barrels, has entered into the steel-export trade and is placing orders for steel rails and structural bridge material not only in the United States, but in Cuba, Porto Rico, and the Philippines. There seems to be a general increase in the output of all manufactories in Liege, and I am told by business men that the outlook for a steady and substantial increase in all branches of trade is very good.

While Liege industrials have established a market in the United States for their products, I note a reciprocal feeling here toward American goods. The demand for American goods can frequently be heard, but it is impossible to locate such goods here to any great extent. Whether the scarcity of American goods comes from the antipathy of the local business men or the indifference of American manufacturers I am unable to say. Some of the business men inform me that the fault lies with the American exporter. Many American houses have their resident export agents in London and the goods are distributed from that point, but only when the merchant himself looks them up. It is a rare thing to see a representative of

an American house in Liege, the business and wealth of which should command the attention of any firm desiring trade, it matters not how extensive it may be.

The catalogue system of advertising does not in any sense appeal to the merchant here. The buyer wants to see the goods in bulk or large sample, to examine the fabric and texture, and to listen to the arguments of the American drummer. While on the subject of advertising, I will say that the American tourist is unconsciously a drummer for American products. His patriotism induces a system of contrast and comparison decidedly in favor of his home manufactures. This disposition of the American traveler is oftentimes productive of much good, and while the foreigner receives these laudatory exclamations with astonishment, nevertheless his curiosity causes him to investigate, with the result that he finds the articles as proclaimed by the traveler.

I believe that arrangement whereby American goods could be exposed in foreign markets, extending all facilities for minute examination, would fully justify any expense. Only yesterday a thrashing machine of German make was being exhibited before one of the largest cafés in Liege, and at a time when the place was filled with people from the country, the occasion being bourse day. The machine was taken through various streets and the merits of the same were being explained by a demonstrator.

It is readily conceded by all that American farm implements and machinery are superior to those of German or English manufacture, but I am informed that Liege has no representative of American farm machinery.

English and German manufacturers have captured the markets of Liege as far as commodities are concerned.

JAMES C. McNALLY, *Consul*.

LIEGE, BELGIUM, *October 5, 1903.*

FLANDERS-AMERICAN TRADE.

(From United States Consul Mowrer, Ghent, Belgium.)

The increase in the volume of trade between the Flanders and the United States during the fiscal year 1903 was in about the same proportion as in former years. Exports to the United States increased \$367,252 in value, and imports, of which there are no detailed figures for this district available, but of which there is daily evidence in the shipments of machinery, flour, raw cotton, petroleum, pitch pine, hardware, canned goods, and shoes which enter this city, the distributing center for the Flanders, must be large. Agencies exist for American typewriting machines and cash registers.

Direct importations are made generally to Antwerp, Brussels, France, and England, and from there American wares and goods find their way into this district. This results from the fact that American exporters do not send representatives here in person to solicit trade, as do English, French, and German dealers. On the other hand, many Belgian exporters have their representatives in the United States, and American importers come or send their agents here annually to buy the merchandise they require. It seems strange that the importers in the United States should show more practical interest in this trade than the American manufacturers and exporters.

There are excellent steamship facilities for the transportation of merchandise between American ports and this district via Antwerp, which is only about an hour distant by train from Ghent. Tank steamers were the only ones arriving direct from the United States during the year.

FRANK R. MOWRER, *Consul.*

GHENT, BELGIUM, *October 12, 1903.*

AMERICAN TRADE IN CANTON.

(From United States Consul-General McWade, Canton, China.)

In Canton there is a good demand for many kinds of machinery. Rice-hulling machines, knitting machinery (especially for hose), and small power engines (kerosene) will find a market here; in fact, any modern invention attracts the Chinese.

If there were more representatives of American manufacturers here with samples, undoubtedly agencies could be established and profitable business result in many branches.

Trans-Pacific freight rates are most reasonable at present, while New York and eastern American shipments via the Suez Canal are lower now than ever before. The entering of the great ships of the Hill Line (Great Northern Railway) from Seattle will create a still cheaper through rate as far as Chicago and St. Louis. This, coupled with the construction of the new railroad from Canton to Peking, brings the products of central and southern China to the world's markets, whereas formerly, owing to crude and expensive methods of transportation, this was impossible.

ROBERT M. MCWADE,

CANTON, CHINA, *September 25, 1903.*

Consul-General.

DECLINE OF AMERICAN SHIPPING IN THE CUBAN TRADE.

Under date of October 17, 1903, the United States minister to Cuba transmits statistics showing the decline of American shipping in the three ports of Cardenas, Matanzas, and Sagua la Grande. The statistics, of which the following is but a very condensed extract, appeared in the Habana Post of October 6, 13, and 16.

Henry P. Williams, ex-American shipmaster, to the editor of the Habana Post.

MATANZAS.

Recently, while visiting Matanzas, I had the honor to address you a few lines with some figures of its shipping trade and of those who did the carrying. To my surprise I found that out of 1,000,920 bags shipped from Matanzas between January 1 and August 31, 1903, only 47,680 bags were carried under the American flag.

It was not my intention, while visiting Matanzas, to investigate or say anything regarding our trade, but on looking over the magnificent harbor there, which in my younger days was full of American vessels, while to-day nothing of "Old Glory" is in sight, I was prompted to make inquiries, and my communications as to their results will end with this letter.

Thirty years ago, when trading between New York, Philadelphia, Portland, Me., and Matanzas, I have sometimes counted at one time in the latter port as many as 70 American vessels, half of them discharging millions of hogsheads and box shooks, coal, and sundries and the other half loading sugar and molasses for the United States.

CARDENAS.

I thought that by going over to Cardenas, which we American shipmasters in the old days considered one of our own ports, I should find more satisfactory conditions.

There was a time when 40 to 60 American vessels could be seen daily at Cardenas, discharging and loading during the crop season, viz, about six months of the year.

I remember that in those days sugar was shipped in boxes and hogsheads—hogsheads and boxes made in the United States, whence they were transported to Cuba in American vessels.

That trade represented \$3,500,000 to \$4,000,000 per year to our American cooper shops and lumber merchants.

It also represented \$1,000,000 to \$1,500,000 annual freight to the American vessels sailing between the United States and Cuba. The outward business from Cuba was in our hands also.

Between the value of the package, the freight inward, and the freight outward there was an approximation of \$8,000,000 per year American trade, which has disappeared.

To-day the sugar is shipped in bags made in Calcutta, transported from Calcutta to England and Germany, thence to Cuba, in foreign bottoms, while the sugar is carried in foreign ships to the only country that consumes it—the United States. Out of 952,315 bags shipped from Cardenas to the United States from January 1 to September 30, 1903, only 10,136 bags went under the American flag—approximately 1 per cent.

The following is a summary of the transport of those 952,315 bags, and the flags under which they were carried:

	Bags.
British	723, 769
Norwegian	110, 732
Spanish	91, 648
Danish.....	15, 000
Cuban.....	11, 031
American.....	10, 136
Total.....	952, 315

SAGUA LA GRANDE.

At Sagua la Grande out of a shipment of 526,467 bags of sugar during the nine months ended September 30, 1903, not a single bag went under the American flag.

AMERICAN APPLES AND CIDER IN FRANCE.

(From United States Consul Thackara, Havre, France.)

In consequence of the poor apple crop of last year and of the poorer one of the present year, there has been a large increase in the importations into France of American dried apples, both for cider making and for cooking purposes. The imports of chopped apples for cider making in 1902 were 3,071 tons, against 1,568 tons in 1901 and 4,399 tons in 1900. Of apples for cooking purposes, evaporated apples, and apple rings the imports were, in 1902, 241 tons, as compared with 194 tons in 1901 and 402 tons in 1900. For the first eight months of 1903 the imports of chopped apples have been 6,000 tons, against 1,800 tons during the same period in 1902 and 1,300 tons in 1901. The imports of evaporated apples for the first eight months of 1903 were 480 tons, against 110 tons in 1902 and 134 tons in the same period of 1901. American evaporated apples have met with a ready sale this year. The failure of the French apple crop is likely to have a lasting effect upon this particular trade, as the American products have been widely distributed and have reached centers where they were hitherto unknown.

As mentioned above, the apple crop of 1903 proves to be even less than that of last year. Prices for green apples have already reached very high levels, and as the present wine crop of France will also be a poor one, causing the prices of wine to be greatly increased, it is not surprising that large quantities of chopped apples have already been contracted for in the United States, and there seems to be every indication that there will be a still greater trade in these products.

Our shippers should be careful to see that the chopped apples before being packed in the barrels are well dried, as complaints

have been made of apples being damaged by moisture. On the whole, the quality of the American apples received at Havre has been good, and they have been satisfactory to the consumer.

It is to be regretted that greater efforts are not made to export fresh apples from the United States to France. The scarcity of fruit of all kinds in this country is so great this year that I feel assured there would be a good sale for such excellent apples as could be supplied from our Eastern States. The duty of 3 francs (58 cents) per 100 kilograms (220.46 pounds), when imported direct, should not be a serious hindrance to this trade, since the importation of green apples from other countries has taken place on a large scale.

The imports of fresh apples and pears for table use into France during 1902 were 10,158 tons, against 4,360 tons in 1901 and 5,536 tons in 1900. Of the above amounts a very insignificant portion is received at Havre from the United States. For the ocean journey the apples should be selected and well packed.

I am assured by the local dealers that at the present time there is also an outlet in France for American cider. If any of our cider manufacturers should be interested in finding a market in France for their products, I would be pleased to furnish them with the names of responsible houses in Havre with whom they could make connections or with details concerning prices, customs duties, etc.

A. M. THACKARA, *Consul*.

HAVRE, FRANCE, *October 22, 1903.*

AMERICAN BUILDING WOOD IN HAVRE.

(From United States Consul Thackara, Havre, France.)

The imports of wood into Havre for building purposes during 1902, although less than those of 1901, were larger than the average for the past four years. Of the imports of oak in 1902 (2,988 tons) 2,438 tons were received from the United States, 479 tons from Roumania, 43 tons from New Caledonia, 21 tons from Russia, and 7 tons from Germany. There were 5,879 tons of oak staves imported in 1902, of which 5,858 tons came from the United States. Of the walnut imported 344 tons were of American origin and 52 tons came from various other countries.

Of the other woods, under which is included pitch pine, 30,528 tons were received from Sweden, 20,284 tons from the United States, 14,565 tons from Russia, and the remainder from Norway, Madagascar, and Canada.

From the above it will be seen that Havre is a good market for

the sale of American wood, but if our shippers would be more careful in filling their orders according to the requirements of the French trade the sales would be still greater.

In the following table are given the imports of building wood into Havre during the past four years.

Description.	1902	1901.	1900.	1899.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Oak, undressed, squared, or sawed, in various dimensions	2,988	3,681	6,743	3,893
Oak staves.....	5,879	10,154	6,953	6,727
Walnut, undressed, squared, or sawed	396	592	49	134
Other woods, undressed, squared, or sawed	69,511	73,897	66,031	64,137
Total	78,774	87,324	79,776	74,891

SUGGESTIONS TO AMERICAN SHIPPERS.

For the benefit of American shippers of wood to France I give the following extracts from a letter I have received from Mr. Charles Humbert, one of the largest importers of wood in Havre, in answer to my request for suggestions as to how the trade relations between the United States and France might be increased.

I would recommend that more uniformity and regularity be displayed in the execution of contracts, in the dates of delivery, in the quality of the merchandise; in short, scrupulously to observe the agreements made, a point to which insufficient attention is at present given. There appears to be a certain degree of indifference prevailing, which is not only prejudicial to business relations, but affects confidence on both sides.

For example, an American exporter, finding it difficult to execute a contract made several months previously, will not hesitate to ship wood of an inferior quality, hoping, later on, to make an allowance to the importer or a reduction in the price. This allowance or reduction, even when accepted, is by no means satisfactory to the buyer, for he will not be receiving the quality of merchandise ordered. The American exporter is too much bent upon effecting sales, with solely his own interests in view. If he would also consider those of the buyer he would be more apt to develop his trade relations.

I have transacted business with the United States for many years, giving special attention to lumber, or wood sawn as it is in the Baltic; but with the exception of several well-known houses, it is always with apprehension that I make a contract, for I fear that it will not be executed in conformity with the requirements. I can not lay too much stress on the point that if I buy first-quality lumber and second or third quality, worth less, is delivered to me, the situation is an embarrassing one; for even if a reduction is made, the difference in price does not compensate me for not getting what I ordered.

I wish to mention two other points which appear to pass unobserved in the United States, and which prevent or interfere with the development of trade:

First. For the French market, wood should be sawn in certain customary thicknesses, based on metric measurements—for instance, 0.027 millimeter (1.06 inches), 0.034 millimeter (1.34 inches), 0.041 millimeter (1.61 inches), and 0.054 millimeter (2.13 inches). The Americans persist in sawing their timber in inches—i. e., 1 inch, 1.25

inches, 1.5 inches, and 2 inches. These measurements are short of those required here, and it is frequently impossible to make use of wood sawn in such dimensions.

The giving of strict attention to the wants of buyers is one of the strongest points of the Germans, who manifest a marked desire to observe all requirements, and their shipments are always accompanied by documents in proper order.

Second. In regard to the care which ought to be taken of merchandise by shippers (a) in the transportation by rail from the sawmills to the ports, and (b) while the merchandise is at the port awaiting shipment. Special attention should be directed to these two points.

In concluding this series of suggestions, based on long experience, I would also direct the attention of American exporters to the choice of the employees whose duty is to examine, either at the mills or at the port of shipment, lumber to be sent abroad, and upon whose certificates the sellers make out their invoices. I have frequently observed that the work of these inspectors has been very carelessly done, and that documents regarding the quality, quantity, and dimensions of the lumber have frequently been inaccurate.

A. M. THACKARA, *Consul*.

HAVRE, FRANCE, *October 22, 1903.*

AMERICAN OIL CAKE AND CORN IN FRANCE.

(*From United States Consul Thackara, Havre, France.*)

OIL CAKE.

During 1902 France imported 109,260 tons of oil cake and meal of all sorts, against 116,968 tons in 1901 and 111,860 tons in 1900. The imports for the first eight months of 1903, 1902, and 1901 were 85,225 tons, 71,573 tons, and 72,639 tons, respectively.

A large portion of the imports comes from Russia, from which country, besides other kinds of oil cake, is imported a linseed cake very rich in oil, which is extracted in France by treatment with bisulphide of carbon. The receipts from Russia in 1902 were 39,362 tons.

The United States participated to the extent of about 20 to 25 per cent in the total importations of oil cake into France, the amounts received from the United States being 24,052 tons in 1902, 21,702 tons in 1901, and 27,736 tons in 1900. For the first eight months of 1903 the imports of oil cake from the United States were 14,320 tons, against 16,876 tons during the same period in 1902 and 11,952 tons in 1901. No classification is made in the custom-house statistics of the different kinds of cake which come into France; but while more American corn cake has been imported this year, the quantities of linseed cake are probably about the same as in former years, and those of cotton-seed-oil cake considerably less.

As a result of the large increase in the supplies of oleaginous seeds the production of cake in France has augmented in a similar proportion. During the year 1902, 148,922 tons of the native

product were exported, against 111,439 tons in 1901 and 98,521 tons in 1900.

Germany is the largest consumer of French oil cake, the exportations to that country in 1902 being 89,007 tons. Other countries to which the native product was sent are Belgium, Norway, and Sweden. France is obliged to do both an exporting and importing trade in oil cake, for the reason that large quantities of certain kinds of cake are produced annually which the French farmers are not in the habit of using for cattle feeding or fertilizing purposes, while the native production of the kinds which are in demand for local consumption is not sufficient.

Faulty shipping.

American gluten corn cake is very much appreciated by the French farmer, and large quantities have been imported lately from the United States. So many bitter complaints have been received at this consulate in regard to the condition of the cargoes which have arrived here during the past few months, however, it is to be feared that there is great danger of losing the French market for this product. Of the 4,855 bags of American gluten corn cake which were discharged at Havre from the steamer *Dona Maria* during the first week in October, more than one-half were damaged. As the receivers had paid for the cake against documents, their loss was heavy. As this kind of cake is delicate and easily spoiled, the greatest care should be taken by the American exporter to see that it is properly prepared for shipment to foreign markets.

CORN.

The grain crop of France in 1902 being a good one, the importations of foreign cereals all showed a falling off as compared with the previous year.

The importations of corn also showed a decided decrease. They were 26,783 tons, against 70,642 tons in 1901 and 72,119 tons in 1902. Of the corn receipts the Argentine Republic sent 13,945 tons; Roumania, 6,137 tons; Turkey, 3,019 tons; and the United States only 3,684 tons, which was the total amount of American corn received in France, against 86,218 tons in 1901 and 119,672 tons in 1900. To the high price of American corn last year and to the abundant French harvests may be attributed, to a great extent, the falling off of the imports of our great cereal; but another principal reason was the wretched condition in which the grain arrived. Attention has been called to this matter in the last two annual reports of this consulate and in a special report dated May 7 last and published in CONSULAR REPORTS for July, 1903.

During the present year the imports of American corn into France

have increased. For the first eight months of 1903 they were 55,623 tons, against 3,682 tons during the same period of 1902. I am assured by the local grain dealers that had our corn been in better condition their purchases would have been much heavier. In fact, they suffered so much loss and annoyance from handling the American grain that they stopped buying it altogether. They also tell me that if the new crop does not come forward dry and in a healthy condition they will look to our competitors to supply their wants.

As foreign outlets are necessary for the sale of the surplus of our monster corn crops it would be wise for our grain shippers, commercial exchanges, and chambers of commerce to pay special attention to having American corn intended for foreign markets in good shipping condition before loading, and to require the steamship companies to make proper arrangements for transporting the grain after it is loaded.

It is to be hoped that the investigations which are being made by the United States Department of Agriculture as to the causes of deterioration of American corn, and the remedies for the same, will bear good fruit, and that our American grain exporters will realize the necessity of keeping up the standard of corn for foreign use, if they wish to hold the trade they already have or to gain new markets.

A. M. THACKARA, *Consul*.

HAVRE, FRANCE, *October 22, 1903.*

AMERICAN RETAIL STORES IN GERMANY.

(From United States Consul-General Guenther, Frankfort, Germany.)

The following is a translation of an article from the *Taegliche Rundschau* (Daily Review), regarding the establishment of American retail stores in Germany:

It certainly has not escaped the careful observer of our economic development that American commercial enterprises are systematically trying to gain a firm and lasting footing in the larger cities of Germany for the sale of American products by the establishment of retail stores.

Wandering through the business streets of our large cities, these efforts of Americans become self-evident. Generally speaking, this was heretofore only the case with branches of a specifically American nature.

Of late, however, the Americans appear also as competitors in the most varied branches of our home large-scale industry.

American competition has almost paralyzed some of our industries—for instance, those of typewriters, sewing machines, and cash registers. Photographers' articles and musical instruments also form an important branch of American competition. Now the experiment is added to establish American shoe stores. The tendency of all these American establishments is above all this: to deal directly with the purchasing public, avoiding as far as possible all middlemen.

The Americans try furthermore to simplify their business by dealing in only one article which they have specially prepared for the German market. On the other hand, they endeavor, of course, to attract customers with all the cunning which American business men are known to use so well. At the same time, they often do not hesitate to employ means which are considered unusual here.

The main strength of this American competition, however, comes from the fact that these American enterprises in every way call attention to their American character in the most striking manner. This is quite in contrast with the German usage, according to which the German business man abroad seeks to avoid as far as possible his German personality.

Considering the great liking which our sometimes more than naïve public entertains in general for everything non-German, the Americans find their game an easy one.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *November 5, 1903.* *Consul-General.*

HOW TO BUILD UP AMERICAN TRADE IN GERMANY.

(From United States Consul-General Guenther, Frankfort, Germany.)

FAULTS OF AMERICAN METHODS.

I am quite sure that the faulty methods employed by most of our manufacturers to secure and maintain trade in the Frankfort district apply to the whole of Germany.

It may be stated as a general truth that any article of manufacture which finds a ready sale in the United States will sell in Germany, provided it is placed before the public in a proper way and at a reasonable price. American goods are usually looked upon with favor by the general public here, although rival German manufacturers often try to disparage them. While the new German tariff, soon to come into force, will raise duties all along the line, still I believe that many American manufactures will be able to compete here with German goods and those of other countries in the German market. I do not believe, however, that sporadic efforts to introduce American goods will meet with success.

It will not do for an American manufacturer to expect a paying and lasting trade here unless he first carefully looks the field over. No man who is not an expert in the particular line of goods for which a market is sought here is qualified to give an opinion thereon that would warrant the American manufacturer in embarking in an export trade to Germany.

If an American manufacturer comes to the conclusion that he is so situated that he at all times will be able to promptly supply the German market with his goods, and believes that on account of

the superiority of his manufacturing facilities he can compete with German and other products in Germany, he should, before doing anything else, either come here himself or send a reliable expert to study the situation on the spot, look into the rates of transportation and of duties, find suitable houses to act as his agents, etc. The comparatively small expense of such a course will cut no figure if he succeeds—even less if he sees that the business promises no profit.

My advice to every prospective American exporter to Germany (for that matter, to any other country) is first to acquaint himself with all the conditions of the market, carefully look up suitable agents, have the necessary contracts drawn up by reliable German attorneys in conformity with German laws, and make preparations, if it is decided to engage in the business, to be able at the shortest notice to supply what is needed by the German customers. I have frequently heard complaints by German firms handling American goods that their patience and that of their German customers has been sorely tried by the dilatoriness of American firms in shipping further supplies. Not infrequently German customers, becoming disgusted, gave up dealing in American goods solely for this reason and handled afterwards only such German or other goods as could be supplied on short notice, although perhaps affording less profit.

There are many articles of American manufacture which will command a ready and profitable sale if the precautions I have tried to indicate be taken. The success of many American firms in doing business in Germany is well known. The statistics of our exports to Germany speak louder than individuals.

AMERICAN FURNITURE.

One branch which, above many others, would seem to promise well is that of furniture for the poorer and middle classes. No country, on account of the abundant supply of raw material and of the large scale of manufacture and superiority of machinery, can compete herein successfully with the United States. If a furniture syndicate would send an intelligent expert over here to study the styles "in vogue;" establish depots, say, at Bremen, Hamburg, or some other suitable place; ship the furniture so as to get the benefit of the lowest rates (as ocean freights are based upon space, not on weight); furniture in "knock-down" shape, to be put together and varnished on this side, I feel certain an excellent paying business could be established, provided the same were conducted by men well posted and possessing that commercial tact and intelligence which marks our successful business men at home.

A company with sufficient means would do a business here that would in all probability exceed their most sanguine expectations.

I have no statistics on hand, but I believe that of all furniture imported into Germany the United States does not supply more than about 15 per cent. It should be 80 per cent at least, and besides American furniture, for the reasons stated, should also supplant a great part of the German manufacture, as any expert coming over here would see at a glance.

AMERICAN BOOTS AND SHOES.

A very useful lesson of how to increase sales of American manufactured products in Germany is taught by the success attained by Mr. Adolf Barthman, of Newark, N. J., in American boots and shoes. For many years United States consuls in Germany had been pointing out the great possibilities for American foot wear in Germany, but no American firm, to my knowledge, made other than sporadic efforts to gain this trade. In April, 1901, however, Mr. Barthman, assisted by his two sons, opened a store at Berlin for the exclusive sale of American shoes; a second store was opened in Frankfort February 27, 1902, and a third at Hamburg October 15, 1902. All these stores are doing a large business and have already given much uneasiness to German manufacturers.

The Chamber of Commerce of Leipzig, in its annual report for 1902, states:

The boot and shoe industry could not look upon the past year with satisfaction. While prices for a large part of the required material, especially leather, were increasing, the manufacturers of boots and shoes could not effect an even approximately comparative increase in price for their manufactures. The cause was to be found in the decreasing demand as coexistent with the general economic depression; also in the complete cessation of exports and the glutting of the home market with foreign manufactures, especially of American origin. It was especially the highly developed American shoe industry which in late years has made considerable efforts to gain a firm foothold in the German market. It is a matter of rejoicing that at last the German dealers showed themselves opposed to the introduction of American shoes. This, however, did not deter American capital from continuing the competitive battle by establishing its own shoe sale rooms on the largest scale at Berlin, Hamburg, Frankfort, etc.

Whether Leipzig will escape will depend upon the purchasing public, which so far has always shown especial preference for foreign products, although it knows it will be better and as cheaply served with home articles.

Other chambers of commerce have expressed themselves similarly. The statements of the Leipzig Chamber of Commerce, however, are not borne out by the official statistics.

Germany in 1902 was neither glutted with foreign shoes nor did German shoe exports cease; the latter were even larger in 1902 than in 1901, while the imports were smaller.

The imports of American fine shoes into Germany for 1902 were 67.6 tons, out of total imports of 698.5 tons, or less than 10 per cent,

and they were less than the German exports to little Holland or Denmark.

It is gratifying, however, to note that the imports of American shoes in 1903 show a large increase over 1900 and previous years—due to the intelligent efforts of Americans like Mr. Barthman.

For the first six months of 1903, as compared with the same periods of the two preceding years, the imports of fine shoes into Germany were as follows, according to official statistics:

Imports.	1903.	1902.	1901.
	<i>Met. tons.</i>	<i>Met. tons.</i>	<i>Met. tons.</i>
Total imports.....	368.7	366.3	428
Imports from the United States.....	52.2	37.5	37.8

MISCELLANEOUS AMERICAN MANUFACTURES.

The same reasons which apply to the imports of furniture and boots and shoes into Germany apply to a number of other articles of American manufacture, as, for instance, tools of all kinds, stoves, clocks, watches, sashes, doors and blinds, locks, hinges, doorknobs, improved machinery, etc.—in fact, to very many articles which are produced in the United States on a scale of magnitude hardly known in Germany or in other European countries.

NEW GERMAN TARIFF.

The new German customs tariff, which passed the Reichstag on December 25, 1902, after one of the fiercest parliamentary fights ever had in that body, has not gone into effect yet, as this requires an imperial order, with the consent of the Federal Council (Bundesrath), which has not been issued so far, nor have the rules and regulations with reference to the new tariff been established. This new tariff, as has been stated quite often heretofore in the press and in consular reports, has placed higher duties on many articles than the old one calls for. The country of origin must be clearly stated with reference to goods subject to differential duties in the invoices. In doubtful cases the customs authorities may call for further and more specific evidence.

RICHARD GUENTHER,
Consul-General.

FRANKFORT, GERMANY, *October 9, 1903.*

No 281—04—4

AMERICAN OPTICAL GOODS IN GERMANY.

(From United States Vice and Deputy Consul-General Mason, Berlin, Germany.)

In the opinion of parties interested in the manufacture and sale of optical goods there exists a good market in Germany, Austria, and other European countries for American gold-filled wire, nickel wire, and steel wire. It is claimed that the American manufactures in these lines are distinctly superior to those of Europe and are also somewhat cheaper. Americans have not attempted to compete in these lines abroad and, as far as can be ascertained, only one agent in Berlin imports American wire for optical purposes, and that on a small scale. A good example of the superior quality of American workmanship is furnished by the fact that an advertisement for the manufacture of gold-filled wire bearing the stamp R. A. was inserted in the *Optician*, a technical paper of Berlin, for eight months, as the wire in question was of American make. It is estimated by a manufacturer of optical goods that \$75,000 is a minimum annual valuation for the amount of gold-filled wire consumed in Germany, it being likely that the consumption is much greater. The value of nickel and steel wire used is very much greater than that of gold-filled wire, but there are no statistics on this subject and it is not possible to obtain even approximate figures. The forms desired are the same as those used in the United States—the half frame, the cornered, and the flat—so there is no necessity on the part of American manufacturers to make any change in their products to meet the requirements of the European market.

There is quite an important trade done in india rubber and celluloid plate for the manufacture of eyeglass and spectacle frames, the principal importer being the Hamburg-American Celluloid Manufacturing Company, which imports large quantities of plates from the United States for use in the manufacture of frames and for other purposes. No plates are manufactured of celluloid or india rubber for eyeglass and spectacle frames in Germany, but a French syndicate carries on an active competition in them. It is believed that the American exports to Germany in these lines can be increased by pushing the sale of the goods. The thicknesses of the plates are, as a rule, 4 millimeters (0.157 inch), but plates of 5 and 6 millimeters (0.197 and 0.236 inch) are used and for certain manufactures plates of 10 millimeters (0.394 inch) are required.

A large amount of gold-filled chains for optical and other purposes are exported from the United States to Germany, and this line of goods is deservedly popular in this country.

Parties are known at this consulate who are ready to exploit or introduce these articles among German manufacturers, and it would appear that in the sale of wire for optical purposes there exists a new and heretofore undeveloped field for American enterprise that certainly deserves investigation.

DEAN B. MASON,
Vice and Deputy Consul-General.

BERLIN, GERMANY, *November 7, 1903.*

BERLIN AS A MARKET FOR FOOD PRODUCTS.

(From United States Consul-General Mason, Berlin, Germany.)

Year by year the German capital—which, including its closely annexed suburbs, has now become a city of 2,500,000 souls—continues to make larger and farther-reaching demands upon the world for food and drink. Germans as a race are robust and vigorous; they are healthy, liberal eaters, and among the well-to-do classes in towns and cities the prosperity of recent years has developed a corresponding tendency toward varied, generous, and luxurious diet.

The Province of Brandenburg, at the center of which Berlin is located, is for the most part a sandy plain of limited fertility and not especially productive of the fruits and vegetables which are required among the food supplies of a great modern city. The interior rivers of Germany yield only a moderate supply of fish, and by reason of Berlin's remoteness from the sea salt-water varieties are uniformly dear in the local markets.

For these and other reasons the enterprise of those who cater to the city's needs has been stimulated to new and farther-reaching quests in foreign countries for the raw materials of its daily fare. In a report of this series written in October, 1900, it was stated that the arrivals at Berlin of live geese from Russia averaged, during the late autumn and winter months, about 15,000 daily. The whole import of live geese to Germany amounted to 6,220,055 in 1900, 6,431,247 in 1901, and 7,254,145 (valued at \$5,513,492) in 1902, a steady increase which is typical of most food imports which supply the great middle classes of the German people. Similarly, the importations of eggs, which come mainly from Austria-Hungary and Russia, increased from 118,169 tons in 1900 to 128,153 tons in 1902. American fresh apples, the importation of which to Germany began in 1896-97, reached last year a total of 5,835 metric tons and will this year far transcend all previous records. By the middle of October, an unusually early date, American apples were on sale throughout the markets and provision stores of Berlin, and the daily press reports

Rheinland and Westphalia "ueberschwemmt" (flooded) with them. As they are hardly more expensive than the ordinary native fruit and far superior to everything except the choicest and very costly Tyrolese and French apples, they are consumed here in constantly increasing quantities.

But it is in respect to the new and hitherto inaccessible forms of food materials that the movement of recent years has become notable and interesting. The flesh of reindeer, brought in a frozen state from Lapland and Finland, may be found in the Berlin market throughout the winter, and its use is steadily increasing. The importation of salted beef from Siberia in through cars direct to Berlin is an innovation of the past six months which promises to reach important proportions. Several large dealers of this city have their own specially constructed cars in which live fish are brought from Scandinavia, Russia, and the German seaports. A special steamer, the *Bianca*, is now on its way from Nicolajewsk, at the mouth of the Amur in eastern Siberia, with a cargo of salmon for a Berlin firm which has purchased, under a time contract, the catch of the fishermen in that region. The *Bianca*, which left Nicolajewsk on the 30th of September and is due at Hamburg early in December, is equipped with apparatus which will bring the fish through in a frozen condition and, it is anticipated, will be kept permanently in that service.

Still more original and remarkable is the enterprise of a Hamburg firm which has an agency in Berlin and makes a specialty of eels, a species of fish so highly prized in Germany that the supply is usually inadequate to cover the demand.

The new waters to be worked for the supply of eels for Berlin includes a group of fresh-water lakes in Egypt, near the mouth of the Nile. These lakes and ponds are for the most part old channels of the branching water courses of the lower Nile Delta, and, as has been recently found, swarm with eels, which the natives are either too indolent to catch or do not esteem highly as food. Having obtained a suitable concession, the German firm has sent down an active and capable Baltic fisherman with the nets, traps, and other paraphernalia of his trade, and he is now engaged in educating the Egyptians in the science of eel catching. The industry is centered at Matarieh-Mensaleh, a station on the railway where a large depot has been established, to which the eels are brought for sale by the fishermen, who receive for them about 1 cent each, or \$10 per thousand. They are then cleaned, rubbed with salt, and packed in casks between layers of ice impregnated with formalin, a benign antiseptic derived from formaldehyde. Thus prepared, the casks are shipped by rail to Alexandria, where a large cellar warehouse will receive

them pending shipment, the first lot having been recently sent by Austrian-Lloyd steamers to Trieste and thence by rail to Hamburg. This shipment included 25,000 eels, weighing altogether about 8 tons; but it is expected, when the scheme is fully organized and in working order, to handle weekly about 60 tons, or 150,000 eels, which will, at least during the winter months, be sent from Alexandria to Hamburg by sea.

Fresh-water crabs, formerly abundant in the rivers of Germany, and esteemed here a great delicacy, have of late years been decimated by a pestilence against which no effective remedy could be found, and since that calamity the deficit has been supplied by importations, principally from Russia, the Berlin market taking eagerly all that the Russian fisherman can provide.

Among the newer articles which have found a ready market here during the past few years is the cactus fig, which comes from Mexico, Central America, and Brazil, and was sent here originally as an experiment by some of the German merchants located in those countries.

Thus far no country has profited more from the robust appetite of the Fatherland than Italy. The importations of Italian poultry, fruits, wines, olive oil, macaroni, and vermicelli are now so enormous as to constitute one of the chief sources of revenue for the St. Gothard and Brenner Pass railways. Berlin has scores of Italian provision stores, restaurants, and wine depots which import their own supplies and deal exclusively in southern products. Within the past month a new company, with a capital 5,000,000 lire (\$965,000), has been organized by Signor Piso, backed by a leading bank of Milan, for the express purpose of exporting wines, alimentary pastes, and other food products to Germany and Switzerland.

FRANK H. MASON,

BERLIN, GERMANY, *November 14, 1903.*

Consul-General.

MARKET FOR AMERICAN FOOD PRODUCTS IN GERMANY.

(From United States Consul-General Mason, Berlin, Germany.)

In a report written one year ago (ADVANCE SHEETS No. 1503, November 24, 1902), the attention of American exporters was invited to the fact that there is in Germany a practically unlimited demand for many kinds of dried, smoked, and salted fish, as well as for fresh fish, which are caught either in salt or fresh water under conditions which permit them to be exported to this country by cold-storage

vessels in a fresh or slightly cured condition. As a result of this announcement there was received here early in January last a letter from a citizen at Urbana, Ill., stating that large quantities of eels were caught in that region, but as they are not highly esteemed as food there they must be either wasted or sold for nominal prices. He would therefore prefer, as the letter stated, "to dispose of the product in a country where a market already exists, rather than incur the expense of creating one at home. I can furnish the product in any desired quantity up to 50 or 100 tons." This seemed reasonable. The letter was turned over to a merchant here, who organized a company or firm for the special purpose of importing whatever quantity of eels the Illinois dealer could supply. A letter was sent containing a small check to evince good faith, and propositions asked for on a large scale, but the supply of eels must have failed, for the letter of the Berlin company was never answered nor its remittance returned.

SUGGESTIONS FOR AMERICAN EXPORTERS.

It is unpleasant to be obliged to report that while American food products, almost without exception, have been found excellent and have met with ready and profitable sale in Germany, there is a very general complaint among importers about the unreliability of American exporters. Not only are the goods sent often found to be inferior in quality to the samples on which the sale was based, but in numerous cases shippers, who have meanwhile found a market at home, not only neglect to fill European orders, but forget to notify would-be purchasers of their refusal or give any explanation or reason for it. It has come to be a rule of the trade that the German importer of food products can not safely depend exclusively on an American source of supply.

For example, genuine English Chester cheese, which is largely consumed in this country, costs, landed at Hamburg, about 18 cents a pound. American Chester, considered here nearly or quite as good as the English, is handled in New York for 9 to 10 cents per pound, and German importers would gladly pay such prices if they could secure reliable connections. Two importing firms—one at Berlin, the other at Hamburg—did some time ago form such a connection and imported several lots with entire success. Then the price advanced in America, and although they had a firm contract for three and four months' delivery, and in two cases had sent checks with their orders, they claim that the goods did not arrive, they were left without supplies, and to save their trade had to go back to the London market. Good American-made Limburg cheese, which is handled in the States at 5 and 6 cents per pound, would bring 11 to 12 cents c. i. f. Hamburg, and there are importers who would

gladly buy large quantities of all the standard American varieties of cheese if it could be purchased and paid for at a German port.

There is also here a ready market for canned and cured salmon, and especially for smoked sturgeon, an insufficient supply of which is obtained from Russia and sold here for 75 cents per pound. If the sturgeon that are caught by the pound-net fishermen along the shores of the Great American Lakes were cured in the same manner as that prepared by the Russians of the Volga, the whole product could doubtless be profitably sold in Germany.

Another promising article would be the kernels of peach and apricot seeds, which are largely used here as a substitute for bitter almonds by makers of macaroons and other confectionery. Almonds cost at wholesale in Hamburg from 15 to 18 cents per pound, whereas peach and apricot kernels, in so far as they can be obtained, bring from 11 to 13 cents, which is enough cheaper to give them a ready sale. If the great fruit canneries of Maryland and the Pacific States could employ machinery that would crack their waste peach and apricot pits in such a way as to save the kernel, they could sell their entire output in this country.

Dried American apples, apricots, pears, and prunes are now so well known and so highly appreciated here that the only improvement to be suggested is a better and more direct plan of bringing them into the German market. Here, as has been already noted, there are numerous more or less well-founded complaints about delayed shipments, broken promises, goods not up to sample, and the hard, unaccustomed American conditions of "cash against bill of lading." There are large dealers in Berlin who would gladly confine their entire trade to American dried fruits if they could only form reliable and satisfactory connections, or, what would be still better, buy their supplies from a great wholesale depot at Hamburg, where they could place contracts in advance and see what they were paying for. Again and again the suggestion has been made that such a depot, opened and maintained at a German seaport by an American firm or by an organization like the Fruit Growers' Association of California, would double the sale of such products in Germany within a year. As it is, many dealers continue to handle dried cherries, prunes, and apricots from Dalmatia, Servia, Hungary, and other southern European countries that are inferior to the American and relatively much higher in price, but can be easily and surely obtained and bought under European conditions of delivery and payment.

FRANK H. MASON,
Consul-General.

BERLIN, GERMANY, *November 14, 1903.*

AMERICAN TRADE AND ENTERPRISE IN GUATEMALA.

(From United States Consul-General Winslow, Guatemala City, Guatemala.)

IMPORTS FROM THE UNITED STATES.

The United States is more than holding its own in the race for the imports of this Republic, which, it may be said, are generally decreasing, because of the hard times through which the country is passing. Large quantities of groceries, flour, potatoes, shoes, dry goods, and clothing come from the United States, but Germany and England seem to have the lead in machinery and hardware. There is surely a fine opening in these latter lines for our exporters, but they must be in position to push their goods personally, to give longer credits, and to take more pains with packing.

PACKING.

This is a very important matter for our exporters to study. Goods must be well packed that there may be as little loss in shipping as possible, and this packing should be as light as possible consistent with the safety of the goods, since the same duty is charged per pound on the case or box as is charged on the contents. So it is plain to be seen that the lightest of woods should be used, and instead of using too heavy or thick boards more band iron to strengthen the corners and edges should be used.

The European shipper has the packing question down to a finer point than the American shipper, but I am glad to say the American is improving, and with more study and care will win. It is one of the principal things to overcome in our conquest of the Central and South American markets.

TARIFF.

As emphasizing the necessity for scientific packing, I invite the attention of our exporters to the tariff of this Republic, which indirectly often works to an almost prohibitive degree when heavy packing is resorted to.

The duties in this country are either levied on the gross weight or on each article; there is no ad valorem duty. During the past year by a decree of the authorities of Guatemala the rate of duty collected has been increased about 50 per cent. Since most of the duties are collected on gross weight the question of packing is a big item which the American exporter does not generally take into account, to the detriment of his future business with these people.

As said before, everything for this country should be thoroughly packed, but with as light material as possible, and not in too large cases. The English and German importers excel our merchants and manufacturers in this.

MACHINERY.

Though little machinery is in use in this country, the best of what is in use comes from the United States. This, however, is very largely wood-working machinery, ice machines, iron-working machinery, etc., as most of the farm machinery comes from Europe, strange as this may seem. The reason given for this by the planters is that American machinery and implements are too light for the native workmen. This is but the prejudice, natural enough, of agricultural laborers who have been used to nothing but the crudest implements, and who imagine that lightness and strength can not be combined. There will be a good opening here for American machinery when better times return, if our manufacturers study the conditions and meet the requirements as to models and weights. I suggest that this is a good time to begin to get ready by sending out a man to study the conditions for all Central America, as the conditions are about the same in all the republics.

AMERICAN ENTERPRISES.

There is quite a large amount of American capital invested in this Republic, and in the main it is earning very good returns, notwithstanding the business depression, for American push wins where others fail.

All the railway interests in this country are American, and much is invested in plantations and other interests—such as mining and lumbering.

In all, it is safe to say, there are \$8,000,000 of American capital invested in Guatemala, and there is an opening for much more, if it is backed by the right kind of management.

There is but one street-car line in this Republic, and that is in Guatemala City. There are about 7 miles of track laid with 60-pound T-rails. Mules are used for motive power and the service is fair. The fare charged, I think, is the lowest in the world, being 1 real, or about two-thirds of 1 cent in United States gold, for a single trip, with no transfers.

ALFRED A. WINSLOW,
Consul-General.

GUATEMALA CITY, GUATEMALA, *October 12, 1903.*

AMERICAN VS. EUROPEAN TRADE IN CUBA.

(From United States Consul Baehr, Cienfuegos, Cuba.)

Referring to the question of competition between American and European houses for the trade of Latin America, I am informed by an intelligent business man of this city that while European houses frequently give longer credits than their American competitors they require a much longer time to fill an order, and that their prices, based on extended credits, are not on the whole as advantageous to the Cuban merchant as the cash prices and short-credit system of the Americans.

Speaking with reference to the alleged deficiencies in American methods of packing goods for shipment to the West Indies, this gentleman tells me that although there is yet room for improvement along this line, American goods are almost invariably packed with greater care and received in better condition than those from Germany and other European countries.

I think I am safe in saying that nine-tenths of the merchants and planters of Cuba regard the United States as their logical trading ground, desiring to find there a remunerative market for their leading staples and equally desirous of buying there the manufactured articles and other necessities needed in the development of their country. The Cuban people are hoping and trusting that reciprocal trade relations between the two countries will soon become a reality, thereby giving a stimulus to the present and prospective industries of Cuba, which thus far since the achievement of their political independence has been distinctly lacking. I do not wish to be understood as saying that the island was in a prosperous condition during the later years of Spanish rule, but certain privileges accorded Cuban products while Cuba remained a colony of Spain terminated when the political separation took place, and the people now turn to the United States as their natural coadjutor in their efforts to place the industries of their country upon a firmer and more prosperous basis than they have ever been in the past.

MAX J. BAEHR, *Consul.*

CIENFUEGOS, CUBA, *October 22, 1903.*

AMERICAN GOODS IN HONDURAS.

(From United States Consul Moe, Tegucigalpa, Honduras.)

This district has experienced a great decrease in the volume of business, owing to the revolution in the early part of the year. The mercantile pursuits are nearly all in the control of Honduraneans, there being only a few foreigners (Germans) with large stores. The shipping of imports at the port of Amapala is entirely in the hands of Germans, who conduct all the great commission houses. Each one of these does a very profitable business.

We can not expect to increase our market in this district until we can overcome the excessive entry expense at the ports, which compels merchants here to sell at prices which are beyond the reach of the common people. American goods are much sought for and their qualities duly recognized, but their prices are prohibitive to the large majority of the people, who are, in general, very poor. It will be readily granted that even in the United States there are few persons who could afford to buy flour at the rate of \$3.25 per 50 pounds; the same holds true of other merchandise. Only the most inferior class of all kinds of merchandise can be sold cheap enough to reach the people. Under more favorable conditions a great market could be established here for American cotton fabrics and general merchandise. Our goods need no advertisement to sell—they are simply beyond the reach of most buyers; nor do the people of this district require peculiar widths of patterns. Implements and tools of all kinds used in manufacture or agriculture should find a ready sale, if properly brought to public notice—that is, by practical demonstration of their usefulness. American hardware and farm implements are not so well known as are our other merchandise.

ALFRED K. MOE, *Consul.*

TEGUCIGALPA, HONDURAS, *October 14, 1903.*

AMERICAN PRODUCTS IN IRELAND.

(From United States Consul Tonnelle, Belfast, Ireland.)

AMERICAN PRODUCTS IN BELFAST.

I have been unable to get an itemized statement of the articles received at this port (Belfast) from the United States. This is due to the fact that most of the imports from the United States are received at Liverpool, Glasgow, Southampton, and other ports, and transshipped to this port by cross-channel steamers; but among the

line of American manufactured goods it may be mentioned that agricultural implements of all kinds are in the lead in the markets here. Many other productions from the United States have a solid footing in the trade in this city, among which may be mentioned American steel, iron, and all kinds of labor-saving machinery, wire nails, sewing machines, lawn mowers, and a great variety of smaller manufactured articles. The tobacco used by the manufacturers is principally of American growth, being mostly Virginia and western leaf, and is used in the manufacture of cigarettes. Boots and shoes of American make, both for women and men, are preferred to all other makes. American flour supplies the market here and is far in excess of the importation of any other country. All kinds of canned goods from the United States find a large and increasing sale. In all the avenues of trade productions from the United States are to be found.

HOW TO INCREASE AMERICAN TRADE IN IRELAND.

I receive many inquiries from correspondents in the United States asking me what is the best method for extending the sale of their manufactures in this market. My reply to all such inquiries is that the goods should always be sold strictly on their merit, using the same care that is given to the extension of the sale of manufactures in the home market, a personal representative or agent being the best method to adopt. Catalogues and price lists receive but slight attention from business men.

WILLIAM W. TOUVELLE, *Consul*.

BELFAST, IRELAND, *October 2, 1903.*

AMERICAN PRODUCTS IN TURIN.

(From United States Consul Cuneo, Turin, Italy.)

Americans have the monopoly of the trade here in sewing machines, typewriters, and cash registers. I am often agreeably surprised to find many other American products in this market, such as radiators, printing presses, bicycles, stoves, cooking utensils, canned meats, and other articles of food. I have seen but one sample of crackers and am of the opinion that these, with the proper push, would find a good market here.

I have noticed considerable American machinery in this city and dealers speak in terms of praise thereof, but complain of the transportation cost to get it to this market.

A dealer showed me samples of American cut goods for the manufacture of shoes and told me that considerable quantities of such goods are imported into Turin.

A call on a chamber of commerce official resulted in the statement that while they had no official figures, it being too early in the year, he could say that in consequence of the advance in price the importation of cotton from the United States had very materially declined and that manufacturers here had correspondingly reduced their output.

I hear considerable said to the effect that England, France, and Germany give Italian purchasers more liberal credits than the Americans grant. German manufacturers especially send agents here, ascertain the standing of buyers, and to those who are found to be responsible six and nine months' time is granted.

Tobacco and salt are Government monopolies and are sold only in stores authorized by the Government, called "Sale e Tabacchi." Immense amounts of tobacco are imported from the United States into Italy, and here, in Government establishments, manufactured into cigars, cigarettes, and chewing and smoking tobacco. I am informed that great quantities of these cigars are exported to South America, especially to the Argentine Republic, where a large Italian population creates a good demand therefor.

There may be more, but I know of but four hotels in this city that have elevators, and rocking and revolving office chairs are exceedingly rare. Of the latter I would be unable to indicate a bank or business room where one could be seen.

PIETRO CUNEO, *Consul.*

TURIN, ITALY, *October 6, 1903.*

HOW TO BUILD UP TRADE IN MEXICO.

(From United States Consul Kaiser, Mazatlan, Mexico.)

WHEN NOT TO COME TO MEXICO.

The rainy season begins the first part of July and continues until the middle or latter part of October, and anybody desiring to visit Mexico for either pleasure or business should be warned against coming here during that time. Good roads and bridges being almost unknown on the west coast of Mexico, it is almost impossible to travel in the interior without exposing oneself to great danger and even risk of life. This also holds good as a warning not to send sailing vessels here during this time, as the weather is very uncertain and all the storms with which this coast is afflicted during the year reach here within the above-mentioned period, and during the past two months there have been five sailing vessels lost in Mazatlan and its neighboring ports.

HOW TO INCREASE AMERICAN TRADE.

The imports of Mexico will this year reach \$60,000,000 gold. As far as the west coast of Mexico is concerned the greater portion of its trade is with Germany, Spain, and France, in the order named. Business here can only be secured on an established acquaintance. The Mexican merchant, as a rule, will not be rushed into buying goods, but when he becomes personally acquainted with the salesman and feels at home with him it is a very easy task to secure orders. It is not difficult to get acquainted with the Mexican people. They are easy of approach and also easy to get on good terms with, but their temperament prevents them from making contracts in a hurry. A firm that has gained the confidence of a Mexican merchant and has secured a share of his business will never think of rushing the decision while the deal is being considered.

If the deal on hand is a very large and important one, it takes sometimes months before it is concluded, and it would be useless for anyone to try to rush things. It is very essential for the agent to speak Spanish fluently, so as to be able to converse with the Mexicans in their native tongue, as very few Mexicans speak English, and while many of the larger houses employ English correspondents in offices yet many of these same correspondents are not able to converse in English or speak it very indifferently.

One of the great advantages in selling goods to Mexico is that failures are almost unknown here, as the merchants of Mexico are very conservative and extend their business only as far as their capital will permit. Fires and their results, which ruin thousands of business men annually in the United States, are of very rare occurrence here. Mazatlan has not been afflicted with a fire for over thirty years.

The Mexicans are polite to a high degree and the Mexican merchant carries this characteristic trait into his business transactions. I have recently heard it said that American manufacturers are too curt in their letters; that they abbreviate their expressions and say what they have to say in a line or two, whereas they might just as well take double that space and say it more fully and much more agreeably. There is such a thing as lack of business courtesy even in correspondence.

Much trade could be gained by the exporter or manufacturer familiarizing himself with the conditions existing in foreign countries. Send the best salesmen here.

In my opinion this is the very best way to gain and increase our trade.

The present consumption of many lines of American manufactures is but a small per cent of the business that should and can be

built up by good salesmen on the ground. The Mexican market—that is, the trade condition which prevails in and governs that market—gives preference to the products of the countries which have personal representatives on the ground to explain and exploit the value of the goods which they expect the merchants to buy.

The traffic between Germany and Mexico has increased to such an extent within the last few months that the German line of steamers now plying between these countries is insufficient to handle the export and import business. Owing to these circumstances, it is contemplated to establish a new line of steamers, making direct trips between Hamburg, Germany, and the Mexican ports.

The German press is well posted on the progress and resources of this Republic, and points out the fact that Mexico is very favorably inclined toward immigration and are loud in their praises of the close commercial relations between Germany and Mexico.

LOUIS KAISER, *Consul*.

MAZATLAN, MEXICO, *October 10, 1903*.

READY-MADE CLOTHING IN MEXICO.*

(*From United States Consul Lespinasse, Tuxpan, Mexico.*)

Manufacturers of ready-made clothing in the United States do not appear to have made any effort to secure a market for their goods in this or adjoining States. Although the duties are high, there ought to be a good demand for moderate-priced ready-made clothing of light texture and attractive patterns. A small assortment of well-made clothing distributed and carefully displayed among the leading dry-goods stores here would no doubt produce good results; these stores carry a very inferior and coarse quality of cheap pants and separate pieces of clothing, without any pretension to shape or fit. The clothing should be of light material—drill, duck, serges, and chevots. Colors should be light, but not gaudy, for the better grades; lower and cheap grades should have bright, striking patterns and colors. For winter-season wear, same goods are suitable, but a trifle heavier weight and darker shades.

With proper attention and a reasonable desire to cater to the tastes of the people, quite a large trade could be secured in this line of business.

Ladies' and children's ready-made dresses and clothing—not too expensive—of plain, light silk, calicoes, and other light material, would also find a good sale in Tuxpan† and in the numerous small

* Vol. 22, part 1, pp. 45 to 69 of Special Consular Reports, is made up of reports on ready-made clothing in Latin America, pp. 46 to 56 dealing with ready-made clothing in Mexico.

† Tuxpan, on the Tuxpan River, 7 miles from the Gulf of Mexico, in the State of Veracruz.

towns scattered throughout this State. Such articles have never been introduced here, and if properly displayed would be very popular.

HOW TO SECURE TRADE.

As it is almost an impossibility for manufacturers to send full samples of their manufactures, and as the cost of maintaining a sales room with attendants, where their goods could be satisfactorily displayed, would be out of all proportion with the orders they might obtain, especially in small towns, it might be advisable for those wishing to secure a market for their wares in this country to send illustrated catalogues and price lists, printed in Spanish, as well as photographs of articles which were desired to be specially brought to the notice of buyers, to the consuls located at the different points in the Republic. If consuls could, with the approval of our Government, set aside sufficient space where such catalogues and photographs could be properly and attractively displayed it would give the people in the different sections of the country a permanent and practical exhibit of American products and facilities for obtaining the addresses of all manufacturers, merchants, and dealers throughout the United States. Aside from the great assistance rendered to American interests by carrying out this plan, it would bring about more intimate relations between our consuls and the Mexican people, enable them to learn their wants and wishes, overcome prejudice, which generally only requires very little reasoning to overcome, etc. This would be a decided gain to the manufacturers, who could dispose of their regular goods without undergoing expense and trouble of often making costly changes.

A. J. LESPINASSE, *Consul*.

TUXPAN, MEXICO, *October 20, 1903.*

TRADE OPPORTUNITIES AND AMERICAN GOODS IN DURANGO.

(*From United States Consul LeRoy, Durango, Mexico.*)

TRADE OPPORTUNITIES.

Trade opportunities not availed of are not worth dwelling on, which is another way of admitting the failure of our exporters at home to cultivate this field as they should have done. The Germans in business here and the Mexicans import largely from the United States, but it is because of their proximity to the United States and the convenience or relative cheapness of transportation, rather than of any intelligent efforts being made on our part to cultivate

their trade. Many inquiries come to this consulate for the addresses of business houses here to which catalogues may be sent, and often these catalogues are in English. It does not matter very much, however, as "cataloguing" is a very poor way of extending trade at best. Commercial travelers from the United States, except for electric supplies, machinery, and similar lines, are comparatively few, and not many speak Spanish. That so large a proportion of the goods sold here are of American origin is due to force of circumstances mainly. The German merchants naturally favor their own country and buy there, except when competition and proximity compel them to purchase in the United States.

AMERICAN GOODS IN DURANGO.

Perhaps 75 per cent of the imported furniture sold here is from the United States, but the percentage should naturally be greater.

Machinery, vehicles, etc., form a line of imports constantly growing in value as this district develops, and it is a line which is practically monopolized by the manufacturers of the United States. It is, however, not intelligently cultivated, and there seems to be no effort to consult the special needs of the market and manufacture products to meet them, while sales in the hands of unsympathetic German dealers are not cultivated as they might be.

A heavy trucking wagon suitable for bad roads—also good, heavy two-wheeled carts—might be sold here. One still sees in the city of Durango itself the ponderous old carretos, with their hubs, spokes, and uneven fellies hewn from solid logs.

Fifty per cent or more of the crockery, glassware, etc., sold here is imported from Europe; it is sold at high prices, and it would seem as if our manufacturers, with a little effort, could secure the trade.

Ready-made clothing has made very little headway here; yet the work of the local tailors is very crude, though fairly cheap.

Our woolen and cotton manufacturers get a fair proportion of the trade, but not so much as they would did they consider the customs and tastes of the people.

American-made hats are, as a rule, worn by the younger generation, as the "sombrero" is going out of use; but this market might be much more intelligently cultivated than it is. The hatters are Germans, Belgians, Frenchmen, and Mexicans.

The trade in American shoes is steadily increasing. Even the poorer classes aspire to have shoes from the United States, as they are far superior to the ordinary product of the Mexican shoemaker, which does not keep its shape and, being crudely sewed to the sole, with no protecting last, wears out in a month or so of heavy use. American shoes sell here at exorbitant prices, considering the

moderate tariff and comparatively low cost of transportation. A pair of men's shoes costing \$3.50 to \$4 in the United States retails in Durango at the equivalent of \$6 to \$6.50. A properly conducted branch of one of our firms should do well.

In the line of groceries, etc., American canned goods hold the field, as far as regards fruits and meats, but the trade conditions are not so favorable in biscuits, crackers, etc.

PETROLEUM.

There is one American enterprise which can not be accused of neglecting its opportunities in this part of Mexico, and that is the Standard Oil Company. It operates in Mexico as the Waters-Pierce Oil Company, and as such runs a number of large refineries in various parts of the Republic, importing its crude oil from the United States at a low rate of duty and enjoying the benefit of a very goodly differential placed by the Mexican Government on refined petroleum.

Most of the crude petroleum now comes from the Texas oil fields. Finds of oil are, however, often being reported in the southern part of Mexico. Cheaper fuel for steam-making purposes would be of great importance to this country. Several of the engines on the International Railroad running into Durango are equipped to burn oil.

The highest grade of illuminating petroleum is retailed in Durango at \$4.95 Mexican per 20 liters in bulk (41½ cents United States per gallon) and at \$10.55 Mexican (\$4.41 United States) in cases of two 5-gallon cans, a slightly increased charge for the cans. These are the prices at which the oil is retailed at the company's branches, and also the prices at which they sell at wholesale to the smaller traders, who, however, deal in the lower-grade brands, of which there are three in illuminating oil.

Under energetic management the sale of oil in this district has perhaps doubled during the present year, and a large number of places have been added to the list of those in this State where the company's products are on sale. The most notable gain has been in lubricating oils, due both to the constant improvement in mining equipment in this region and to the increased activity in behalf of the American concern, which in this line (lubricating oils) has to meet German competition. But no small part of the increase is due to the way in which here, as elsewhere in the less-advanced portions of the world, refined petroleum is replacing the cruder ways of illumination. It is an old story, but repeated continually in the more remote towns of this district, how the Standard Oil Company first invades a backwoods village with a supply of little tin lamps, which are given away filled with oil. Once tried every ambitious peon family must thereafter have an oil lamp, at least for festal occasions.

Nor does the corporation overlook any chances for its by-products here more than elsewhere; in some places it manufactures candles and in others, as here, sells the material to Mexican candle factories.

GAS ENGINES.

The Waters-Pierce Company also sells here a 74-per-cent gasoline at 32 cents Mexican per liter, or about 53 cents in United States currency per gallon. Gasoline forms a small but rapidly increasing proportion of its sales. Some of the smaller towns are using gasoline burners for street lighting. Gasoline engines are becoming common, but their use might be considerably increased with proper pushing on the part of the American manufacturers.

RACE PREJUDICE A TRADE DRAWBACK.

Some general remarks upon a common American tendency which militates against us in this country may not be out of place. Americans who come out here to invest, to push business connections, or to locate and make their own way are too prone to show contempt for the people of the country. It is a narrow, short-sighted idea of "patriotism" and a not-well-founded race prejudice, which is, speaking of this particular district at least, a drawback to the extension of American commerce. Whatever Americans may choose to think of the Mexican peon class, it is undoubtedly progressing, even in relatively backward parts of Mexico. A well-defined middle class is already apparent, and the building of factories, railroads, etc., and the work of the schools are constantly increasing it.

JAMES A. LEROY, *Consul*.

DURANGO, MEXICO, *October 20, 1903.*

AUTOMOBILES AND DISK PLOWS IN QUEBEC.

(From United States Consul Hale, Coaticook, Canada.)

AUTOMOBILES.

I have to report the first automobile to be owned and used in this vicinity (Coaticook). There must always be an advertiser to attract attention, create an interest, and produce a necessity. As the roads in this part of the country are smooth and well kept, there is good reason to believe that in due time this means of traveling will not be uncommon. I think an active agent might interest some one here as a local agent to get trade in this line, probably at first in the lower priced machines.

DISK PLOWS.

Since coming here I have not seen a disk plow. The farm lands are extensive, smooth, and free from stones and the disk plow would work to good advantage. I have suggested the same to some farmers and local dealers in agricultural implements, giving them the names of American manufacturers. The progressive farmers here are desirous of using those machines which can prove their superiority. Their utility in ditching, gardening, and orcharding, with light draft, is an advantage to be noted, in comparison with the plows of local manufacture. If the right man could secure a live local agent and in the coming spring give the farmers an opportunity of seeing what can be accomplished with this plow, I see no reason why a satisfactory trade could not be worked up.

Advertisement by circulars is of little value to overcome competition. The personality of an earnest agent is a requisite to the desired results.

FRANKLIN D. HALE, *Consul*.

COATICOOK, CANADA, *November 13, 1903.*

AMERICAN TRADE AND CAPITAL IN NEW- FOUNDLAND.

(*From United States Consul Cornelius, St. John's, Newfoundland.*)

IMPORTS.

The imports into Newfoundland from the United Kingdom are positively declining, those from Canada have increased but very slightly, while those from the United States have increased nearly 50 per cent during the last three fiscal years, as will be seen by the following official figures:

Whence imported.	1901.	1902.	1903.
United Kingdom	\$2,329,621	\$2,208,505	\$2,147,827
Dominion of Canada	2,489,499	2,609,155	2,869,897
United States.....	2,088,465	2,500,066	2,920,914
All other countries.....	568,917	508,659	541,306
Total	7,476,502	7,826,385	8,479,944

AMERICAN INVESTMENTS.

American capitalists are among the foremost in developing the wealth of Newfoundland. Of such interests I may mention the York Harbor copper mine, the Benoit chrome mine, the Valley Island and the Bay Vert pyrites mines. The York Harbor deposits are the

richest copper beds in the world, and the present owners are spending \$250,000 in their development.

In the lumber industry the company headed by Mr. H. M. Whitney, of Boston, has acquired several large properties in the colony and is operating them on a hitherto unequalled scale. Mr. George J. Barker, of Boston, has also acquired a large grant and is developing it extensively. An American syndicate is now negotiating for forest tracts on the west coast for charcoal manufacture as well as for ordinary lumbering.

AMERICAN TRADE OUTLOOK.

There is room for the sale of large quantities of American machinery for lumbering and pulp making. Harmsworth, the great London publisher, has secured a large forest area and is now arranging for the establishment of a pulp and paper making plant to cost \$2,500,000. The United States practically controls the trade in agricultural machinery, but now, when American capitalists are interesting themselves to such a large extent in the development of the industries of Newfoundland, is a good time for an aggressive campaign by American manufacturers for the general enlargement of their trade in the colony.

POSTAL RATES.

The postal rate from the United States to Newfoundland is 5 cents per half ounce—not 2 cents, as to the Dominion of Canada (Newfoundland not being a part of the Dominion), a fact which many American correspondents, to their own loss, seem to forget. Through this oversight considerable business is lost, twice the shortage being charged, and letters are frequently refused by those to whom they are addressed.

GEO. O. CORNELIUS, *Consul*.

ST. JOHN'S, NEWFOUNDLAND, *October 20, 1903.*

TRADE OF NORWAY WITH THE UNITED STATES.

(From United States Consul Cunningham, Bergen, Norway.)

The trade of Norway with the United States is disappointing when the official records are consulted. Not only are these disappointing, but they give an inadequate idea of the real quantity of American goods consumed in Norway. In viewing the articles of trade offered for sale in the different shop windows, one is struck with the great number which are made in the United States. The

same is true throughout Norway, American travelers inform me, but the trade reports fail to show any considerable quantity originating in the United States. The reason is simple; direct shipping facilities are poor and merchandise is accredited to the country of last port of shipment, much to the detriment of American trade reports. Salesmen from the United States with samples of goods could do much in building up American trade in Norway. Along the west coast, from September to May, there is a continual stream of German, English, French, and other European traveling salesmen, but it would be a novelty to see an American salesman in this country.

If European houses find Norwegian trade valuable enough to seek by personal representatives, it would seem that American houses would find it quite as profitable, especially as so many Norwegians are disposed to favor American goods. There is scarcely a family on this coast but has some tie that binds it to the United States. A son, a daughter, a brother, or other near relative has gone to the United States to seek his or her fortune, and the many who return bring with them recollections of American trade that, given a fair chance, would yield handsome returns to American houses directly seeking the trade of Norway.

Corn, wheat, and rye, either in the grain or ground, are very largely imported.

Agricultural implements, cutlery, machinery, stationery, and many other articles should be bought and shipped direct instead of being purchased through English houses.

The following statement shows the direct imports into Norway from the United States during the year 1902. How much the indirect imports amount to I have no way of finding out.

Articles imported direct from the United States.

Article.	Value.	Article.	Value.
Meats, not smoked.....	\$226,942.40	Staves.....	\$54,067.20
Butter, ordinary.....	255,136.00	Woods.....	54,136.00
Oatmeal.....	23,074.81	Steel and iron, bolts, wagon boxes, etc.....	43,469.61
Flour, wheat.....	346,175.61	Tools and implements.....	36,885.00
Sirup and molasses.....	27,764.81	Parts of steamships.....	36,501.61
Tobacco and cigars.....	167,017.61	Mowing machines.....	49,151.20
Apples and pears.....	9,889.20	Agricultural implements.....	6,137.20
Fruits, dried.....	16,053.20	Machinery of other kinds.....	38,109.61
Cotton.....	10,076.81	Bicycles and parts.....	8,040.00
Leather and skins.....	270,197.00	All other articles.....	16,701.91
Tallow and margarin.....	650,141.20		
Oils (petroleum, linseed, etc.).....	724,243.20	Total	3,332,714.20
Rubber goods, manufactured.....	61,800.81		

Exports from Norway to the United States in 1902.

Article.	Value.	Article.	Value.
Fat herring, salted.....	\$1,393.61	Cod-liver oil, all grades.....	\$45,265.00
Mackerel, salted.....	76,996.40	Dry cellulose.....	191,646.00
Preserved meats.....	4,261.20	Books	60,005.00
Cheese	1,340.00	All other articles.....	62,685.00
Skins:		Merchandise not of Norwegian ori-	
Fox	2,546.00	gin	68,206.00
Calf	2,492.40		
Hides and cuttings.....	17,500.00	Total	534,336.61

E. S. CUNNINGHAM, *Consul.*

BERGEN, NORWAY, *September 29, 1903.*

**HOW TO BUILD UP AMERICAN TRADE IN
RUSSIA.***

(From United States Consul Slocum, Warsaw, Russia.)

Warsaw is said to be the gateway for the introduction of foreign manufactures into Russia. Conditions here are favorable to the introduction of foreign goods, not only on account of the location geographically, with all the attendant facilities for shipment, but more particularly because of a deep prejudice against German manufactures which exists to the extent of almost a boycott of all German articles. The French, British, and Austrian manufacturers have been able to take advantage of this, and their salesmen cover this territory frequently and with success.

The American representative, except in the interest of the agricultural-implement manufacturer, is a rarity. In general, the American manufacturer seems to think the ground covered when he has appointed a general agent for the whole of Europe, and this agent, at least as far as Russia is concerned, is usually located in some great German city. I firmly believe that the time has come when, to satisfactorily increase our trade in Russia, local agents must be maintained and personal representation secured where possible.

In the main, credits may be said to be good, and yet here again is where personal representation is of service. That the Russian general agent of a foreign manufacturer, except in the case of goods destined for the Siberian market, should be located here in Warsaw is a point conceded.

Of the increase or decrease of trade in the principal articles in which Americans are interested it is impossible to obtain figures, as the only statistics published (which appear two or three years after

* Extract from Consul Slocum's annual report on the trade and commerce of his district for 1903.

date) do not show which of the goods passing through the thirteen custom-houses situated in the district are merely in transit to or from other parts of the Empire.

Agricultural implements.—American interests are chiefly centered here in the agricultural-implement field, and with the exception of motors and thrashing machines—with Germany second—we practically control the trade, which is ever on the increase.

Typewriters.—Typewriters are sold here, but at figures which prevent general adoption.

Miscellaneous manufactures.—Other American goods are on the market here, but for the most part they are imperfectly introduced or reach this trade through Hamburg and Berlin commission houses.

Any and all of the following articles could be either increased in sale or introduced with profit, viz: Wringers, meat choppers, hair clippers, mechanic's tools of all kinds, cotton and cotton waste, rubber shoes, machine tools, and all labor-saving devices. The latter would find a particularly responsive market at Lodz, the "Manchester of Russia," where are located numerous woolen, linen, and cotton mills whose owners are alive to every opportunity and who are progressive in every sense.

Any improvement in machinery would be accorded a careful and intelligent investigation and the American manufacturer should make the attempt to reach these people. In fact, there is hardly a line produced by the inventive American manufacturer which can not, with effort and regard for local needs, be brought to profitable sales.

CLARENCE RICE SLOCUM,

WARSAW, RUSSIA, *August 27, 1903.*

Consul.

RUSSIAN AND AMERICAN PETROLEUM IN GERMANY.

Export, a German trade paper, in its issue of September 24, 1903, says:

The taxation of Russian petroleum according to measure instead of weight and the general increase of the test point have been advocated. The fact that Russian oil is heavier than American oil causes the former to pay a higher duty per gallon than the latter under a weight tariff. The duty on raw and refined petroleum in Germany is \$1.43 per 220 pounds; while on lubricating oil it is \$2.38 per 220 pounds, including the weight of the wrapper. In the former commercial treaty with Russia the duty on refined petroleum has been levied according to both measure and weight. It is stipulated in the protocol to this treaty that petroleum for lighting purposes shall be taxed, not according to weight, but according to volume, and that 125 liters (33 gallons) at 15° Cel. shall equal 100 kilograms (220 pounds). This decision has found favor in the new tariff, so that it will not come under the influence of the commercial treaty but will be employed independently. The specific gravity of oil

on which there is a duty of \$2.38 according to weight must be 0.8. American petroleum meets this requirement, while the specific gravity of Russian petroleum is 0.82. Two hundred and twenty pounds of American oil amount to 33 gallons, while the same amount of Russian oil will measure 32.25 gallons. The duty on 3 gallons is about 4½ cents. The taxation according to volume is very important as far as Russia is concerned. During the period 1897-1902, the amount of petroleum imported (into Germany) from Russia rose from 9,037,482 gallons, valued at \$357,000, to 41,763,565 gallons, valued at \$1,886,400; while imports of American oil fell from 255,161,072 gallons to 229,825,125 gallons. In the last year imports of Russian petroleum reached the value of \$4,545,800, of which sum \$2,558,500 was for lubricating oil; American petroleum was imported to the value of \$15,898,400, of which amount \$5,367,800 was for lubricating oil. A reduction of the tariff on Russian petroleum was opposed in 1893 by the German Government on financial grounds. We do not know whether they take the same view now or not. The figures given above show that the import of Russian petroleum can be assisted by other means than by a reduction of the tariff. At any rate the decreased tariff would only aid the imports of petroleum for lighting purposes, but lubricating oil and crude petroleum, which is imported in considerable amounts for purposes of refining, would not be affected thereby. When the new tariff is discussed in the Reichstag, the question will be considered as to what the effect will be of different duties for raw and refined oil on the creation of a great German refining industry. The beginnings of such an industry are already at hand, as the comparatively successful development of a few refineries in the last few years have shown. Their further extension is hindered by the fact that raw petroleum pays the same duty as the refined product.

SWISS-AMERICAN TRADE.

(From United States Consul Gifford, Basel, Switzerland.)

EXPORTS TO THE UNITED STATES.

Five countries sold more goods to the Swiss in 1902 than the United States—Germany, France, Italy, Austria (frontier countries), and Russia. The grain and petroleum of the latter country enabled her to supplant the United States as the fifth furnisher of goods to this Republic. But as a market for Swiss goods our far-off country holds the astonishing rank of fourth among the nations of the world. In 1901, only Germany, Great Britain, and France bought more Swiss products than the United States, and of these France only leads us by a nominal figure. The value of the exports to those countries and to Italy and Austria in 1902 was as follows:

Germany.....	\$38,980,000
Great Britain.....	35,990,000
France.....	21,610,000
United States.....	21,030,000
Italy.....	10,840,000
Austria.....	9,070,000

Thus, Switzerland sends goods across thousands of miles of land and sea to the United States to twice the value of what she sends to either of her great neighbors, Italy and Austria. In fact, she sells

\$1,000,000 worth more to us than to Austria and Italy together. This is an achievement of which Switzerland may well be proud, if all the circumstances, internal and external, are taken into account. And it may be doubted whether there is another land, great or little, that can furnish such a proof of its economic vigor and intelligence and of its advanced industrial development.

IMPORTS FROM THE UNITED STATES.

The total imports from the United States in 1902 amounted to \$11,880,000, being only \$60,000 more than in 1901. Only a few years ago the imports and exports balanced each other; but in 1902 we bought nearly twice as much from as we sold to Switzerland. The difference, however, has been caused rather by an increase of our purchases than by any decrease of our sales.

Of our leading articles of export to Switzerland, Kansas wheat—in great demand last year—was largely supplanted by a fine quality of grain from Russia and Roumania, offered at a lower price; but toward the end of the year there was an advance in the price of wheat, irrespective of its origin, the home crop having proved deficient in quality.

On account of the sharp advance in price from the beginning to the end of the year, lard—another of our great articles of export to Switzerland—fell off 25 per cent as compared with the previous year. Since 1899 the importations of lard have, in fact, decreased one-half. As a substitute, butter, both natural and artificial, has been introduced from Italy and Styria, but not in sufficient quantities to supply the whole deficit. Accordingly, it is assumed that there has been a diminished consumption of this important article among a large part of the population.

The importation of petroleum, on the other hand, shows a steady increase since 1899, reaching 21,042,000 gallons in 1902, though the price for the American article had considerably advanced. Eighty per cent of this import is of American origin; and this proportion continues even with the higher price demanded and obtained on account of its superior quality, as compared with the lower-grade Austrian and Roumanian products, which are its chief rivals in this market.

The total import of tobacco in 1902 into Switzerland rose to a point never before reached—over 15,000,000 pounds. As compared with the previous year there was a decrease of about 4 per cent in the importation from the United States, while Greece, Turkey, Algeria, Central America, the Argentine Republic, and China came much more prominently forward as sources of supply.

GEO. GIFFORD, *Consul*.

BASEL, SWITZERLAND, *October 15, 1903.*

AMERICAN PRODUCTS IN SWITZERLAND.

(From United States Consul-General Peters, St. Gall, Switzerland.)

Fruit.—The imports of fresh fruit into Switzerland during the first six months of 1903 amounted to 3,329,480 pounds, valued at \$88,650. This was in the dull season; the imports for the year will probably be three times as much. In these imports the United States had absolutely no share, the largest proportions coming from France, Germany, and Italy.

With dried fruits the United States has done better, for out of a total importation of 1,907,400 pounds it furnished about 21 per cent, but could certainly furnish much more if the business were properly organized.

Corn.—Switzerland imported 105,353 bushels, valued at \$747,842. Of this amount the United States supplied only a little more than 8 per cent, while the Danubian Provinces furnished 43 per cent. Russia supplied three times and La Plata over twice as much as the United States.

Flour.—Flour was imported to the amount of 30,552,940 pounds, valued at \$497,000, of which the United States furnished only one-half of 1 per cent. France, Germany, and Russia have the bulk of the trade.

Cigars and cigarettes.—The importation of cigars and cigarettes amounted to \$200,000, of which the United States furnished 2½ per cent, the balance of the importations coming, in the order named, from Germany, Russia, the Netherlands, Turkey, and Egypt.

Horses.—There were 6,200 horses imported, valued at \$833,997, or an average of \$134.51 per head. Of this number not one is credited to the United States, Germany and France taking the bulk of the trade.

It would only require a little organization on the part of our breeders and dealers to find a good market in Switzerland for their horses. Let them write to the consular officers describing the character of the horses they offer and stating the price, landed at Basel (freight charges can be ascertained from any of the steamship companies); the consular officer will then make it his business to find reliable agents competent to furnish necessary information as to the kind and character of horse that would sell best in Switzerland.

Shoes.—Switzerland imported shoes valued at \$400,000. Of this amount American manufacturers furnished a little over 3 per cent, the balance of the trade going to Germany, France, Austria-Hungary, and Italy. There is one trouble connected with the sale of

American shoes which should be corrected. The American manufacturer, when he makes his contract with his foreign agent, should stipulate that he should not charge above a certain price for the article at retail. As it is now, every town in Switzerland has a different price, and I may say that every store in every town has a different price; this is not conducive to business.

Machinery and tools.—In machinery and tools we rank next to Germany, which out of a total import of 1,563,760 pounds furnished 804,320 pounds, while the United States furnished 539,880 pounds. The total value of the machinery imported is given at \$107,000.

Petroleum.—The importation of petroleum amounted to 64,675,160 pounds, of which the United States furnished 48,575,340 pounds. The total value of petroleum imported is given at \$765,000.

THOMAS WILLING PETERS,
ST. GALL, SWITZERLAND, *October 15, 1903.* *Consul-General.*

AMERICAN PRODUCTS IN BRADFORD.

(*From United States Consul Day, Bradford, England.*)

Shooks.—The importation of American shooks into this district is assuming considerable proportions. Nearly all shippers of textile merchandise have resorted to the use of these cases for forwarding their goods to the United States. The first attempts to introduce them were made in 1892, but it was some years before the full advantage of their use was realized. In 1902 there were 6,918 cases imported, while during the first nine months of the present year there have been 18,893.

Automobiles.—Notwithstanding the strenuous endeavors of the English, French, and German manufacturers to obtain the supremacy of the market, it is pleasing to note that American automobiles can be seen running about this district. This part of the country is very hilly, and light knock-about cars of 5 horsepower, which owing to their reasonable price have found favor, are well spoken of and give satisfaction.

Furniture.—The demand for American furniture has been as great as ever, but unfortunately the import houses have not been able to get their orders executed promptly. They still complain of the apathy of our manufacturers in endeavoring to meet the English taste, and assert that were this done a much larger volume of business could be transacted.

Hardware.—In the hardware trade our productions continue to make headway. There is a growing demand for labor-saving devices, and goods which are well made have a ready sale.

Provisions.—In provisions there has been a fair sale of American goods, though in regard to hog products a greater run than heretofore has been made on imports from Canada, owing to the increased prices asked for those from the United States.

In general, there has been an increased demand for American goods, and enterprising exporters have been successful in establishing a market for their commodities.

ERASTUS S. DAY, *Consul*.

BRADFORD, ENGLAND, *October 20, 1903.*

CONDITIONS IN SOUTHWESTERN ENGLAND.

(*From United States Consul Stephens, Plymouth, England.*)

Trade conditions in the southwestern district of England remain in a somewhat depressed state. The improvement in commercial circles during the last two months of 1902 has not continued. The conditions in labor circles are less satisfactory than usual. In the coal mines the demand for labor declined, and in the shipbuilding trades employment is slack. In the cotton trade the condition is described as bad—much worse than a year ago—less than half the women and girls in spinning mills being in full employment, while only 38 per cent of those in weaving factories are on full time. The iron miners, however, are doing well, and in the iron and steel industry generally the state of things is described as fair. The continual decline of mining in the counties of Devon and Cornwall has caused large numbers of miners to leave for South Africa and the United States, but as the former country now offers small inducement to white labor, the emigration from Cornwall to the United States must increase. The china-clay industry, too, is passing through a period of depression.

The official returns contain some instructive figures showing the effect of the industrial depression on the general average of pauperism, which in the southwestern district is 34 per 1,000 of the population, as compared with an average of 26 throughout the Kingdom. Taunton has the lowest rate, 17, and Devonport is next, with 19. Plymouth has 30 paupers per 1,000 and Axminster 50 per 1,000. The last half of the calendar year, however, is always the best for trade, and the ensuing six months may, and in all probability will, greatly change the aspect of affairs.

JOSEPH G. STEPHENS, *Consul*.

PLYMOUTH, ENGLAND, *August 4, 1903.*

TRADE OF THE UNITED KINGDOM WITH THE UNITED STATES.

(From United States Consul-General Evans, London, England.)

GROSS IMPORTS AND EXPORTS.

Imports.—The imports into Great Britain from the United States in 1902 amounted to \$634,808,005, a decrease of \$70,000,000, or about 10 per cent, as compared with the imports of 1901. The imports in 1901 were the largest ever recorded, 1900 being the second largest and 1902 the third. The natural fluctuation of trade may or may not be partly responsible for this falling off; but it is worth recording that the imports from the United States into Great Britain rose steadily from \$398,000,000 in 1888 to \$540,931,585 in 1892, when a decline set in, which ended in 1895, when the imports were \$432,744,300. Since that year, with the exception of 1899, there has been a steady increase until the year under review (1902), when the decrease noted (\$70,000,000) occurred. This decrease was mainly in food stuffs, viz: Maize, \$27,000,000; cotton, \$15,000; fresh beef, \$7,800,000; flour, \$7,000,000; live cattle, \$6,000,000; bacon and hams, oats, butter, etc.

British exports.—The total value of goods of British and Irish produce and manufacture exported to the United States in 1902 amounted to \$118,804,565, an increase of \$27,000,000 over 1901. In this connection, the figures for the five years 1898–1902 are:

1898.....	\$73, 582, 445
1899.....	90, 596, 900
1900.....	98, 904, 155
1901.....	91, 969, 415
1902.....	118, 804, 565

This shows an increase in 1902, as compared with 1898, of \$45,222,120.

With reference to some of this increase, it may be pointed out that apparel and haberdashery increased from \$385,000 in 1898 to \$812,140 in 1902; cottons, from \$6,244,060 to \$9,802,440; flax and hemp, from \$458,475 to \$767,975; linens, from \$8,171,440 to \$11,410,675; iron, wrought and unwrought, from \$6,398,955 to \$18,864,640; oil and floor cloth, from \$208,810 to \$957,860; telegraphic wire and apparatus, from \$77,925 to \$1,941,110; and wool, sheep and lamb's, from \$642,515 to \$3,223,260. The large increase in coal, coke, and patent fuel was undoubtedly due to the shortage in our home output.

Foreign exports.—In exports of foreign and colonial merchandise to the United States in 1902 from Great Britain the total exceeded

that of 1901 by \$314,465 and rose from \$69,089,940 in 1898 to \$96,600,800 in 1902, an increase of \$27,000,000, the total increase of all exports from Great Britain to the United States during the five years 1898–1902 amounting to \$72,000,000.

In the exports of foreign and colonial merchandise there were several articles showing large increases and decreases, some of the most marked being the following:

Increase.

Article.	Value.	Article.	Value.
Animals (horses).....	\$4,250,000	Tin in blocks, ingots, etc.....	\$1,500,000
Bristles.....	240,000	Oils:	
Butter.....	65,000	Olive.....	240,000
Cotton waste.....	130,000	Palm.....	890,000
Dyeing stuffs, unenumerated.....	60,000	Diamonds.....	115,000
Raw grapes.....	185,000	Spices of all kinds.....	200,000
Fruit, preserved.....	290,000	Stationery.....	90,000
Gum:		Tallow and stearin.....	745,000
Kauri.....	295,000	Tobacco, unmanufactured.....	275,000
Lac, seed, stick, and shellac.....	280,000	Furniture, veneers, and hard wood...	325,000
Iron ore.....	100,000	Goat wool.....	265,000

Decrease.

Article.	Value.	Article.	Value.
Coffee.....	\$400,000	Copper, unwrought, etc.....	\$4,000,000
Indigo.....	810,000	Iron, bar.....	65,000
Dried currants.....	50,000	Iron and steel manufactures, unenumerated.....	120,000
Galls.....	95,000	Flax or linseed.....	240,000
Camel hair.....	115,000	Woolens, cloths, and stuffs.....	730,000
Jute.....	160,000		

IMPORTS BY ARTICLES.

The following statement shows the imports into the United Kingdom from the United States during the years 1902 and 1901:*

Article.	1902.	1901.
Animals:		
Oxen and bulls.....	\$30,647,865	\$36,586,105
Cows and calves.....	75,365	34,665
Sheep and lambs.....	1,808,680	2,317,595
Horses—		
Stallions.....	86,500	8,450
Mares.....	532,900	1,608,570
Geldings.....	703,195	1,679,475
Unenumerated.....	5,235	3,185
Arms, ammunition, etc.....	168,030	454,155
Blacking and polishes.....	188,625	241,450
Bladders, casings, and sausage skins.....	463,975	514,395
Books.....	456,010	348,155
Butter.....	1,264,370	3,445,820

* The imports for 1901 have been inserted, for comparative purposes, in the Bureau of Statistics.

Article.	1902.	1901.
Caoutchouc and manufactures of:		
Caoutchouc	\$663,910	\$1,276,345
Boots and shoes.....	1,057,610	867,405
Other sorts.....	743,930	606,965
Cards, playing.....	99,725	82,005
Carriages, carts, etc.:		
Cycles, other than motor.....	517,720	770,745
Motor cars, cycles, and parts.....	595,505	.....
Other descriptions.....	542,780	.....
Cheese.....	4,810,560	6,370,305
Chemical manufactures and products.....	872,040	1,132,295
China and earthen ware.....	17,565	88,135
Cider and perry.....	34,890	59,420
Clocks:		
Complete.....	380,405	467,650
Parts of.....	7,470	8,720
Cocoa	80,335	138,265
Coffee, raw.....	1,909,570	1,881,460
Confectionery.....	212,100	55,475
Cordage, twine, and cable yarn.....	560,390	406,700
Corn, grain, etc.:		
Wheat	72,478,605	67,377,795
Barley	4,683,455	4,363,470
Oats	1,788,815	5,929,640
Rye	231,230	417,345
Pease	496,225	767,405
Maize, or Indian corn.....	2,806,150	29,724,525
Buckwheat.....	625	3,455
Wheat meal and flour.....	36,508,530	43,491,245
Oatmeal	2,239,005	2,486,675
Maize, or Indian-corn, meal.....	318,735	2,285,125
Meal, unenumerated.....	12,240	44,160
Starch, farina, and dextrin.....	433,645	1,017,745
Other farinaceous substances.....	564,970	333,820
Cotton and manufactures of:		
Raw	146,419,645	161,778,560
Waste.....	89,805	206,105
Manufactures of all sorts.....	1,279,040	1,660,725
Drugs:		
Opium	23,875	48,760
All other.....	1,206,375	1,178,355
Dyestuffs and substances used in tanning or dyeing:		
Extracts	317,555	} 329,495
Indigo	4,570	
Eggs.....	339,670	628,215
Electrical goods.....	798,005	1,940,905
Feathers:		
In beds or for beds.....	43,990	94,745
Ornamental.....	26,145	35,085
Fish of all sorts.....	5,506,610	4,180,885
Fruits, dutiable:		
Plums, dried or preserved.....	529,605	88,090
Prunes	148,605	34,470
Fruits, free:		
Apples, raw.....	5,024,000	2,439,420
Nuts, other than almonds.....	38,760	17,080
Oranges.....	58,610	94,545
Pears—		
Raw	395,575	229,235
Dried	243,195	108,110
Preserved, with and without sugar, other than dried.....	895,285	2,444,820
Glass manufactures of all kinds.....	177,945	166,185

Article.	1902.	1901.
Glue, size, and gelatin.....	\$168,065	\$202,155
Gum of all sorts.....	28,685	33,420
Hair:		
Horse	22,275	6,865
Unenumerated.....	326,400	340,735
Hardware, other than cutlery.....	2,527,545	2,378,885
Hay.....	2,390,555	1,693,200
Hemp, etc.:		
Dressed or undressed.....	107,110	106,660
Other similar vegetable substances.....	45,805	13,540
Hides, raw.....	65,165	48,075
Hops.....	1,803,965	1,447,360
Horns and hoofs.....	30,185	35,855
Implements and tools.....	1,523,615	1,721,225
Jewelry	77,625	82,430
Lamps and lanterns.....	75,410	103,195
Lard and imitations:		
Lard	19,173,205	18,878,190
Imitation lard.....	1,390,475	748,830
Leather and manufactures of:		
Leather	17,889,605	16,782,540
Boots and shoes.....	2,257,910	2,028,715
Unenumerated.....	127,320	121,885
Machinery and millwork:		
Steam engines.....	1,870,360	1,817,670
Agricultural machinery.....	1,344,095	1,126,405
Sewing machines.....	900,110	737,550
All other kinds.....	10,419,123	8,791,330
Manures (phosphate of lime and rock).....	1,122,155	985,420
Margarin cheese.....	6,826	36,410
Meat (except poultry and game):		
Bacon.....	41,197,610	46,279,255
Beef—		
Fresh	26,020,285	33,807,935
Salted.....	1,136,415	1,234,635
Hams	17,110,020	21,049,080
Pork—		
Fresh	2,861,640	3,814,965
Salted.....	935,655	1,039,280
Unenumerated, salted or fresh.....	1,299,500	1,379,565
Preserved, other than by salting.....	7,318,090	6,471,520
Metals and ores:		
Brass and bronze, manufactures of.....	206,890	175,260
Copper—		
Ore	108,330	157,940
Regulus and precipitate.....	2,030,490	3,479,490
Old, fit only for remanufacture.....	45,580	29,080
Unwrought and part.....	11,428,670	6,804,305
Manufactures of.....	1,049,600	529,320
Iron—		
Pig and puddled.....	298,810	664,995
Bar	14,135	244,355
Old broken, and old broken steel.....	14,365	24,220
Steel, unwrought.....	172,965	1,471,745
Manufactures of iron and steel—		
Girders, beams, and pillars.....	235	28,900
Nails, screws, and rivets.....	490,920	938,790
Rails (steel) for railways or tramways.	228,850	589,950
All other kinds.....	2,460,945	3,558,800
Lead, pig and sheet.....	2,825,850	2,908,425
Silver, ore.....	516,175	323,206

Article.	1902.	1901.
Metals and ores—Continued.		
Zinc—		
Ore	\$187,245	\$61,470
Crude	679,085	310,035
Metal—		
Unenumerated unwrought.....	245,125	312,175
Unenumerated wrought.....	181,105	149,580
Old, fit only for remanufacture.....	3,015	16,515
Methylic alcohol.....	104,640	81,920
Milk, condensed.....	251,630	733,530
Moldings.....	42,240	61,795
Musical instruments.....	1,394,040	1,447,605
Oils:		
Fish (train and blubber).....	225,775	270,975
Animal.....	164,540	250,650
Seed	1,550,345	1,862,655
Turpentine.....	4,257,420	4,096,635
Chemical, essential, and perfumed.....	153,655	81,800
Unenumerated.....	260,550	221,670
Oil-seed cake.....	5,506,970	5,746,910
Oleomargarine.....	932,445	1,038,535
Painters' colors.....	665,700	981,740
Papers:		
Unprinted.....	1,244,490	1,848,015
Printed.....	294,500	300,095
Strawboard and millboard.....	210,755	179,600
Wood-pulp board.....	296,030	257,580
Paper-making materials:		
Pulp, wood.....	185,255	457,555
All other.....	23,545	53,310
Paraffin.....	4,516,065	4,723,145
Perfumery (without spirit).....	19,870	29,815
Petroleum:		
Illuminating	13,430,510	13,197,635
Lubricating.....	4,281,665	4,164,135
Pickles and vegetables in salt or vinegar.....	5,200	33,650
Pictures and drawings by hand.....	104,890	100,440
Plaiting of straw and other materials for making hats or bonnets.....	29,230	38,610
Plants, shrubs, trees, and roots.....	78,265	73,770
Plumbago.....	224,900	334,875
Poultry and game.....	1,060,095	1,029,390
Rosin	1,943,750	2,032,695
Sauces or condiments.....	110,575	60,970
Scientific instruments (not electrical).....	2,247,590	1,401,065
Seeds:		
Clover and grass.....	1,387,065	820,790
Cotton	657,705	528,965
Flax or linseed.....	1,328,155	746,425
All other.....	33,815	23,845
Shells of all kinds.....	75,080	72,350
Silk manufactures, unenumerated.....	14,935	40,940
Skins and furs:		
Seal skins.....	647,815	808,495
All other.....	2,935,130	2,284,180
Slates	640,270	981,715
Soap and soap powder.....	1,604,655	1,119,895
Spices of all sorts.....	39,665	71,360
Spirits:		
Rum	166,365	87,030
Sweetened or mixed.....	433,775	410,965
All other.....	95,625	71,540
Sponges.....	135,305	112,420

Article.	1902.	1901.
Stationery, other than paper.....	\$440,885	\$396,955
Stones, rough or hewn.....	62,280	41,085
Sugar:		
Molasses.....	1,073,590	1,546,405
Glucose.....	2,313,390	3,029,885
Tallow and stearin.....	975,565	2,265,370
Tar.....	29,690	47,435
Tea.....	146,460	153,910
Tobacco:		
Unmanufactured.....	16,788,355	11,270,055
Manufactured, of all sorts.....	6,885,360	7,660,635
Toys and games.....	194,000	179,320
Varnish, without spirit.....	193,560	190,355
Vegetables, raw:		
Tomatoes.....	5	2,955
Other sorts.....	2,835	2,455
Watches and parts of:		
Complete.....	198,855	234,675
Parts of.....	81,880	62,910
Wax.....	65,340	65,890
Wine.....	113,220	117,125
Wood:		
Hewn, all sorts.....	4,610,510	3,999,945
Sawn or split, all sorts.....	9,495,470	9,935,715
Staves, all dimensions.....	1,089,240	1,108,190
Mahogany.....	155,870	276,295
Unenumerated.....	3,346,925	3,748,790
Manufactures of—		
House frames, fittings, and joiners' work.....	1,932,535	2,378,435
Other sorts.....	2,974,580	2,642,215
Wool, sheep or lamb's.....	39,370	62,170
Woolen manufactures:		
Carpets and rugs.....	20,030	68,380
All other kinds.....	45,130	34,000
All other articles.....	3,152,865	2,778,705
Total.....	634,808,005	705,077,325

EXPORTS BY ARTICLES.

The following statement shows the articles and their value exported from the United Kingdom to the United States during the years 1902 and 1901, distinguishing the articles of British and Irish produce from those of colonial and foreign origin (transshipments):

British and Irish produce.

Article.	1902.	1901.*
Aerated waters.....	\$173,310	\$279,225
Animals:		
Horses.....	472,015	351,915
All other.....	206,490	136,260
Apparel and haberdashery.....	812,140	484,350
Arms, ammunition, and military stores.....	161,545	199,420
Bags and sacks, empty.....	77,745	187,880
Beer and ale.....	1,031,620	1,022,115

* The values of the exports for 1901 were inserted, for comparative purposes, in the Bureau of Statistics.

British and Irish produce—Continued.

Article.	1902.	1901.
Books, printed.....	\$1,873,445	\$1,724,540
Bricks.....	136,385	130,085
Caoutchouc, manufactures of.....	223,980	254,335
Carriages, viz, cycles and parts.....	9,850	8,935
Cement	159,055	87,645
Chemicals and chemical preparations:		
Bleaching materials.....	999,640	1,219,585
Soda compounds.....	547,125	518,560
All other.....	2,415,565	2,392,780
Clay, unmanufactured.....	1,066,885	941,030
Clocks, watches, and parts.....	128,595	77,765
Coal, coke, and patent fuel.....	2,979,090	560,055
Coal products (not dyes).....	642,105	507,890
Cocoa or chocolate (made in United Kingdom).....	56,745	66,510
Cordage and twine.....	50,445	18,080
Cotton yarn.....	1,902,685	1,370,090
Cottons:		
By yard.....	9,802,440	7,033,185
At value.....	6,672,160	6,170,990
Cutlery	369,840	385,815
Earthen and china ware.....	2,491,690	2,561,820
Fish of all sorts.....	1,010,310	724,640
Fishing tackle.....	264,665	273,590
Flax and hemp, dressed and undressed.....	767,975	559,675
Furniture, cabinet, and upholstery ware.....	337,055	248,965
Glass manufactures.....	739,995	658,725
Glue, size, and gelatin.....	312,455	311,040
Grease, tallow, and animal fat.....	263,250	190,895
Hardware, unenumerated.....	228,205	223,355
Hats of all sorts.....	99,510	54,580
Hides, raw.....	999,845	448,565
Implements and tools.....	161,175	151,400
Instruments and apparatus (surgical, anatomical, and scientific).....	125,775	111,125
Jute yarn.....	60,865	48,115
Jute manufactures.....	5,375,045	5,618,670
Leather, wrought and unwrought.....	1,182,375	959,995
Linen yarn.....	328,215	208,730
Linens:		
By yard.....	11,410,675	10,149,865
At value.....	3,286,970	3,042,120
Machinery and mill work.....	3,450,695	2,826,385
Manure	733,450	589,600
Medicines, drugs, and preparations.....	240,845	235,035
Metals:		
Iron, wrought and unwrought.....	18,864,640	9,742,075
Brass and manufactures.....	115,615	121,405
Copper, wrought and unwrought.....	364,570	524,140
Tin, unwrought.....	77,995	63,655
Unenumerated and manufactures.....	348,595	388,095
Oil:		
Seed	295,270	210,710
Other sorts.....	603,655	412,965
Oil and floor cloth.....	957,860	591,940
Painters' colors and materials.....	567,965	557,710
Paper of all sorts.....	424,340	354,020
Pickles, vinegar, sauces, and condiments.....	554,620	578,590
Confectionery, jams, and preserved fruits.....	182,425	115,165
Pictures.....	383,050	369,175
Plate and plated wares.....	111,625	80,690
Potatoes	1,235,880	241,055
Prints, engravings, drawings, etc.....	139,040	119,325

British and Irish produce—Continued.

Article.	1902.	1901.
Provisions, unenumerated.....	\$321,750	\$181,940
Rags and other materials.....	1,110,410	1,115,150
Saddlery and harness	355,395	298,395
Salt	433,710	500,795
Seeds of all sorts.....	212,250	171,815
Ships and boats, new (not British registered).....	2,930	574,745
Silk:		
Thrown, twist, or yarn.....	370,850	368,870
Manufactures.....	1,008,780	1,018,495
Skins and furs of all sorts.....	4,854,035	4,046,020
Soap	250,730	237,580
Spirits, British and Irish.....	1,679,490	1,451,435
Stationery, other than paper.....	475,045	430,870
Stones and slates.....	205,245	186,745
Sugar, refined and candy.....	4,190	36,075
Telegraphic wires and apparatus.....	1,041,110	175,240
Toys and games.....	153,735	150,350
Umbrellas, etc.....	78,240	60,365
Wool:		
Sheep and lamb's.....	3,223,260	1,851,640
Noils, waste, and combed or carded, and tops.....	7,880	19,835
Woolen and worsted yarn.....	146,495	12,825
Yarn, alpaca, mohair, and other sorts.....	22,585	8,235
Woolens and worsted:		
By yard.....	6,861,880	5,212,710
At value.....	545,425	428,705
All other articles.....	3,065,060	2,678,875
Total	118,804,565	91,969,415

Foreign and colonial merchandise.

Article.	1902.	1901.
Animals (horses).....	\$979,085	\$552,415
Works of art.....	54,830	54,815
Bladders, casings, and sausage skins.....	404,870	285,890
Bristles	658,030	416,970
Butter.....	11,085	4,770
Caoutchouc	4,193,600	3,959,265
Chemical manufactures and products:		
Saltpeter.....	1,875	3,875
Unenumerated.....	618,725	732,970
China and earthen ware.....	1,112,690	1,119,980
Cocoa	367,335	380,150
Coffee.....	239,155	654,395
Cordage, twine, and cable yarn.....	78,320	62,070
Cork:		
Unmanufactured	315,555	236,960
Manufactured.....	98,690	107,215
Corn, grain, etc.:		
Rice, rice meal, and flour.....	177,470	225,215
Other farinaceous substances.....	80,870	118,875
Cotton:		
Raw	10,412,090	9,192,575
Waste.....	179,025	46,420
Manufactures.....	425,925	367,345
Drugs:		
Bark, Peruvian	128,755	103,145
Opium	415,095	503,580
Unenumerated.....	673,730	1,052,445

Foreign and colonial merchandise—Continued.

Article.	1902.	1901.
Dyeing and tanning stuffs:		
Cutch and gambier.....	\$84,440	\$134,490
Indigo.....	357,660	1,172,045
Sumac.....	38,770	41,350
Unenumerated.....	119,040	56,090
Embroidery and needlework.....	36,865	57,375
Feathers, ornamental.....	1,513,080	1,617,580
Fish, cured or salted.....	374,955	375,075
Flax, dressed, undressed, and tow.....	747,785	556,040
Flowers, artificial.....	421,350	493,465
Fruits and nuts:		
Currants, dried.....	785	50,730
Figs and fig cake.....	47,595	49,500
Grapes, raw.....	525,365	340,985
Nuts—		
Almonds.....	309,645	291,645
Other nuts used as fruit.....	231,645	307,835
Oranges and lemons.....	61,980	22,025
Raisins.....	21,135	19,175
Dates.....	234,815	102,395
Preserved, with or without sugar or sirup, other than dried.....	576,120	235,535
Galls.....	49,260	144,915
Glue, size, and gelatin.....	178,070	133,570
Glue stock.....	76,535	113,635
Gums:		
Kauri.....	715,990	430,440
Lac dye, seed-lac, shellac, and stick-lac.....	817,085	537,160
All other.....	445,985	470,575
Gutta-percha.....	116,195	103,530
Hair:		
Camel.....	51,705	167,330
Cow, ox, bull, or elk.....	74,130	43,335
Horse.....	81,265	62,075
Unenumerated.....	2,725	7,760
Hats or bonnets:		
Straw.....	67,600	51,150
Of other materials.....	26,195	38,540
Hemp and other textile substances:		
Dressed, undressed, and tow.....	3,548,235	5,222,465
Other similar substances.....	308,065	327,100
Hides, raw.....	1,819,930	2,293,660
Hops.....	64,355	58,514
Ivory (elephant's teeth, etc.).....	273,370	254,040
Jute and manufactures of:		
Jute.....	110,960	263,685
Manufactures.....	3,803,220	5,828,145
Lace.....	3,969,925	2,836,440
Leather and manufactures of:		
Leather.....	1,894,510	2,304,865
Manufactures.....	170,000	243,680
Linen manufactures.....	113,460	90,660
Machinery and millwork.....	254,960	200,530
Matches.....	128,510	244,190
Metals:		
Copper, unwrought, part wrought, and old.....	3,036,370	6,982,595
Bar iron.....	67,675	134,140
Iron ore.....	179,060	82,485
Iron and steel, unwrought.....	30,045	52,150
Iron and steel manufactures—		
Cycles and parts.....	9,120	10,850
Unenumerated.....	118,425	235,750

Foreign and colonial merchandise—Continued.

Article.	1902.	1901.
Metals—Continued.		
Ores, unenumerated.....	\$15,890	\$5,850
Tin—		
In blocks, ingots, bars, and slabs.....	10,807,320	9,201,755
Unenumerated, unwrought.....	246,575	192,190
Mica and talc.....	146,720	152,105
Nuts, unenumerated.....	13,360	69,875
Oils:		
Cocoanut.....	108,355	884,000
Olive.....	526,750	289,405
Palm.....	1,163,195	271,670
Chemical, essential, or perfumed.....	95,620	68,470
Paper-making materials:		
Linen and cotton rags.....	343,845	256,905
Pulp, wood.....	40,625	81,500
All other.....	118,305	128,100
Perfumery	16,265	18,395
Pictures and drawings by hand.....	118,835	284,840
Plaiting of straw, etc.....	215,850	91,915
Plumbago.....	89,465	162,215
Precious stones:		
Diamonds.....	1,276,570	126,040
Other kinds, unset.....	1,042,300	961,560
Seeds:		
Clover and grass.....	74,540	120,345
Flax, or linseed.....	35,430	277,770
Garden.....	99,260	65,905
Unenumerated—		
For expressing oil.....	416,475	414,175
Not for oil.....	103,495	88,865
All other.....	36,810	81,645
Shells of all sorts.....	1,198,970	920,735
Silk:		
Knubs or husks of silk and waste.....	130,705	114,840
Manufactures.....	165,030	131,845
Skins:		
Goat, undressed.....	6,107,070	6,964,525
Sheep	1,697,030	1,642,950
Manufactures.....	35,865	51,085
Skins and furs of all kinds.....	2,387,250	2,305,245
Soap and soap powders.....	47,060	53,730
Spices of all sorts.....	678,125	481,690
Spirits, not sweetened.....	42,920	37,800
Sponges.....	80,390	102,045
Stationery.....	167,880	79,585
Stones, rough and hewn.....	81,960	104,700
Sugar:		
Refined	1,305	3,240
Unrefined	5,050	26,905
Tallow and stearin.....	809,210	62,945
Tea	983,760	855,975
Tobacco, unmanufactured.....	319,190	66,205
Toys	44,670	48,870
Vegetables:		
Onions.....	274,565	243,380
All other.....	77,615	163,600
Watches and parts of.....	54,795	50,265
Wax	68,310	44,740
Wine.....	211,885	259,170

Foreign and colonial merchandise—Continued.

Article.	1902.	1901.
Wood:		
Hewn teak.....	\$70,145	\$40,145
Furniture, veneers, and hard woods.....	1,099,945	771,495
Manufactures of.....	159,585	149,275
Wool:		
Alpaca, vicuña, and llama.....	338,655	173,580
Goat wool or hair.....	295,815	32,180
Sheep or lamb's.....	7,526,275	6,892,785
Other kinds, and flocks.....	133,350	142,490
Woolen rags (not for manure).....	28,500	2,180
Woolen manufactures:		
Cloths and stuffs.....	191,450	823,495
Carpets and rugs.	755,965	621,820
Unenumerated.....	352,435	248,610
All other articles.....	1,993,495	1,165,595
Total foreign and colonial merchandise.....	96,600,800	96,286,335
Total British and Irish produce.....	118,804,565	91,969,415
Grand total.....	215,405,365	188,255,750

LONDON, ENGLAND, *October 23, 1903.*H. CLAY EVANS,
*Consul-General.*TRANSPORTATION AS A FACTOR IN FOREIGN
TRADE.*(From United States Consul-General Mason, Berlin, Germany.)*

As an illustration of the important rôle which the item of transportation plays in foreign trade, it may be stated that a few days ago there came to Germany a merchant from one of the northwestern Pacific States who has acted as purchasing agent of rails and general iron and steel supplies for the western section of one of the Pacific railway systems. He stated that he had bought during the past year, through an English broker, several million dollars' worth of rails, etc., that had come from Antwerp and Rotterdam in grain ships returning to the Pacific coast, and which were glad to take rails and heavy machinery at nominal freight rates as ballast. This they did on such favorable terms that railroad supplies made in Westphalia or the Saarbruck district and floated down to tide water on Rhine barges could be delivered at Puget Sound at a cost for transportation with which Pittsburg, Cleveland, and Chicago, with a transcontinental railroad haul, were wholly unable to compete. He had noticed that the rails, bars, and machinery imported last year bore the marks of German makers, and he had therefore come to obtain further supplies from the ultimate source of production

BERLIN, GERMANY, *November 24, 1903.*FRANK H. MASON,
Consul-General.

SUGGESTIONS FOR EXPORTERS.*

(From United States Consul Monaghan, Chemnitz, Germany.)

FINLAND.

The markets of Finland are reported to demand only the cheaper priced commodities. The days of high prices and great profits are gone. Competition is strong and is entered into by many countries. Only those who are indomitable in the prosecution of a systematic and energetic canvass of the country can hope to reap remunerative business. Finnish industries are also developing rapidly and are with each succeeding year supplying the home markets with better goods. Broadcloth, buckskins, and overcoatings, which, as far as the Austrian export is concerned, had come largely from the cities of Brünn and Reichenberg, are no longer in such demand as in former years, because of the development of the Finnish industry in these cloths. The Finnish weaving industry is expanding more and more by producing not only the coarser cloths, but those of a medium grade as well, while the finest goods are also slowly being made at home. It is the opinion of the Austrian consul at Helsingfors, however, that the Finnish market for the finest textiles, though very limited in amount at present, will remain largely in the hands of the strongest foreign competitors for the coming years. The trade in fine pattern goods is largely in the hands of foreigners. With the development of the economic conditions of the country and the raising of the standard of life, the Finnish market for the finer qualities of pattern textiles will undoubtedly grow rapidly and acquire considerable importance for the exporter of this line of goods.

EXPORT HOUSES OF HOLLAND.

The American manufacturer, like the European, who contemplates the exportation of his goods to the more remote regions of Asia, Africa, or South America by way of the large export houses of Holland located at Rotterdam, Amsterdam, or The Hague is interested in knowing the general method of doing business with these places. The oriental and the southern trade that is annually carried on through the above-named great seaports, as well as through Hamburg, Bremen, Trieste, London, Liverpool, etc., has assumed tremendous proportions. In many cases, possessing the inestimable advantage of priority upon the scene, these houses enjoy a

* The facts presented here are based upon reports submitted to their governments by the consular representatives of Germany and Austria.

prestige that gives them a deciding advantage in the competition for patronage.

It is a common policy for these merchants to conceal from their distant purchasers the place of manufacture of the commodities in which they trade. The goods are shipped as though originating within close proximity to the place of shipment, no matter whether in reality they come from farther Germany, Austria, Russia, Italy, or even America. The "made-in-Germany" principle finds no application here. Manufacturers who are desirous of selling to these exporters must recognize the common practice of quoting prices, not in the factory, but as delivered in Rotterdam, Amsterdam, or other place of shipment. The reason for this is that these big exporters will not take the time and trouble of calculating the freightage and other transportation on goods from the place of manufacture to the place of shipment. Their work is too heavy for this, and rather than consider factory quotations they will waive the opportunity of entering into business relations. The prices of the goods delivered at the place of shipment need not be stated in the currency of Holland, but may be given in that of the country in which the goods are manufactured. The big exporters are so familiar with the different currency systems that the reduction of prices from one system to another is a simple matter. However, it stands to reason that if the manufacturer finds no particular difficulty in quoting in the currency of the Netherlands he had better do so, as this will lighten to that extent the work of the Dutch exporter.

It is reported that many manufacturers refuse to supply the Dutch houses with the necessary samples free of charge, with the result that no business is done. This is a mistaken policy, as the expense of shipping a number of effective samples is not great and the proceeds of the sales that are likely to follow in case the samples are such as the markets controlled by the exporters call for are out of all proportion to the risk involved. The results of trying to do business without the tangible facts of a sample to calculate upon are generally unsatisfactory. No amount of description can replace the ideas gathered through inspection of concrete objects, and American manufacturers who wish to try for business with these Dutch houses ought to bear this fact in mind.

TRADE WITH ROUMANIA.

It is an old story that losses because of failing credits are not uncommon in the trade relations with Roumania. If a distant manufacturer is to prosecute his sales effectively in this country, as in other regions of the Levant, he must resort to some well-informed agent whose business integrity is out of question. It is difficult to

find such men. Not that they are so infrequent, but that one never knows just when the right person has been discovered until a trial has been made. It is by no means safe to rely upon appearances in the selection of a representative, as there are disreputable men who use stationery with large and beautiful headlines advertising their agencies and giving "reliable references." But on closer investigation it is often found that the references are to firms which never had any existence, and that the headlines mean no more than a batch of printer's ink.

The same precaution is necessary in dealing with Roumanian firms direct. It is of great advantage to make a personal visit to the region and meet the men on their own ground, as business correspondence flows much more smoothly when spiced with personal acquaintance. It is wise to inquire from some reliable agent or well-known firm in Roumania before giving credit to a smaller buyer, as some of these can not be trusted, while others are young beginners who have a future before them, who are honest, and whose disfavor it is not well to incur.

It is a common practice with European manufacturers who sell to the Orient to quote prices to Roumanian buyers, not in the factory, but as delivered at the place of sale. In making a shipment the freight is often collected on delivery and so relieves the shipper of this responsibility. He will then have to see that he gets his account for goods actually delivered, and no more. However, great care is required in sending goods with freight unpaid, as large, responsible firms may interpret this as drawing into question their integrity and their honesty. It is only when dealing with unknown buyers that free delivery is not generally practiced, purely to reduce the risk involved to a minimum. Many of the larger buyers have special rates with the transportation and forwarding agents, so that it is well to leave the fixing of the shipping charges to them.

RUSSIA.

The credit conditions and facilities in Russia at the present time are set forth by an Austrian consul as follows:

In the majority of cases cash within thirty or sixty days after the receipt of the goods seems to be the rule, where business is done with the leading houses; in other cases bills of exchange running for six months are issued, the date counting either from the receipt of the goods or from the date of the invoice. When the shipment can not be taken out of the Russian custom-house until after three or four weeks after its arrival, the date of payment is generally extended for an additional month, so that not infrequently some houses ask for not less than seven or eight months of grace.

It is interesting to note here the contrast between the English and the German method of doing business in Russia, as sketched

by the consul already referred to. The Germans are reported to reign supreme at the great center for textiles (Lodz), while the English are unimportant factors in the competition for that market. The reason given for this is that the German exporters make a systematic canvass of the country. They send out their well-equipped men and mail to prospective buyers detailed price lists in the Russian language. The English, on the other hand, are said to be content with mailing a few circulars and price lists to the Russian buyers every year, not in the Russian, but in English language. Besides, while the German not infrequently gives the Russian two or three years' credit for certain orders, the English merchant demands a payment of one-third of the amount of the order as soon as it is placed, one-third on the completion of the goods, and the balance on their arrival. If credit is given at all it is generally for not more than one year at the most.

This experience ought to be a good lesson to all export merchants who are now engaged in the Russian trade, or who contemplate entering it. The transaction of business on a credit basis is so general, even though it be for but a period of a month or two, as in case of the best houses, that no merchant can afford to overlook this condition. On the other hand, the transaction of business on a credit basis calls for endless vigilance and careful inquiry into the character and integrity of the men with whom dealings are to be conducted.

The Germans, as is well known, are probably the most thorough and systematic canvassers of the immense Russian territories and their rewards are correspondingly large. They take pains to send out men who are familiar with the economic conditions of the country, who know the peculiar tastes of the people, who have mastered sufficiently the difficult language to explain their mission intelligently, and who, while they are cautious and discreet in their solicitation of orders, do not hesitate to give credit in order to conclude a bargain. That losses often result through this general practice of credit sales is well known, but the German merchant is a firm believer in those principles of life that make the insurance business a success, and which reassure him that even though he must expect losses in some cases these will be more than counterbalanced by the profits on other sales into which he can alone enter because he is willing to afford credit to his buyer.

J. F. MONAGHAN, *Consul.*

CHEMNITZ, GERMANY, *November 3, 1903.*

TRADE OPPORTUNITIES IN ABYSSINIA.

(From United States Consul-General Guenther, Frankfort, Germany.)

The Welthandel (World's Trade), a supplement of the German Export Review, says that the organ of the manufacturers' association, Hand in Hand, calls attention to the fact that Abyssinia, in spite of contradictory statements of English newspapers, is to be considered one of the most important markets of the near future. The article is as follows:

Some time ago the English papers spoke very disapprovingly of the question of exports from European industrial countries to Abyssinia, and gave it as their opinion that Abyssinia will not for a long time to come be ready for European exports. This is apt to prove false. Abyssinia is no longer an uncivilized country, and, since the beginning of Emperor Menelik's reign, is on the way to become a country after the European fashion. Europeans are called in as heads of government departments, the silver monetary standard is being introduced, the establishment of branches of European banks is planned, and European merchants are induced to locate.

A few months ago the first Abyssinian railroad from the harbor of Djibuti to Harrar was completed, and other railroads, financed by French or English companies, have been secured. The question of modernizing the trade of Abyssinia has become an actual one, and European industrial states, especially Austria and Russia, begin to interest themselves in a comprehensive export to Abyssinia.

So far, France and England have almost a monopoly of the commerce with Abyssinia, and the thirty European firms in the Abyssinian capital of Adis-Abeba are dependent upon French and English products.

At a meeting of Austrian exporters the opinion prevailed that in consequence of the desire of the people of Abyssinia, European exports thereto in almost all branches will become of great value, and that Austria, on account of her favorable ship connection from Trieste and of an old, although half-forgotten, commercial treaty with Abyssinia, would be in a position to overcome all competition if the respective ship companies would reduce their freight rates.

Russia also has a favorable and quick ship communication from Odessa, and the visit of the Russian fleet to Menelik on the occasion of the opening of the Djibuti-Harrar Railroad was dictated by the commercial aspirations of Russia.

So far, nothing is known of any similar steps on the part of Germany for the purpose of clearing the road for German exports to Abyssinia, though Germany has the best chance for such exports, as her steamers for German Africa pass Abyssinia and therefore ship communication is already established.

The article further expresses the wish that German manufacturers will not neglect their opportunity, but seize it before the field is occupied by others.

RICHARD GUENTHER,

FRANKFORT, GERMANY, *October 21, 1903.*

Consul-General.

ABYSSINIA.

Abyssinia, an African Empire known to the ancients as Ethiopia, is rapidly rising in importance industrially and commercially. It is situated in the eastern part of Africa and is presided over by an Emperor with the title "Negus Negusti," which signifies "king of kings." The present ruler is Menelik II, born in 1842, a man of rather remarkable character and singular clear-headedness for one so far separated from the outside influences of the civilized world. After a long and eventful career, Menelik succeeded in securing independence for his country by a treaty signed at Adis-Abeba, August 26, 1896. Up to the present time the different States or Provinces of Abyssinia are ruled over in a manner almost feudal by governors, called rases. Each ras has his own military forces. The total army of the Empire amounts to 150,000 men, all of whom are supposed to be mounted and armed with rifles obtained from the Italians or imported in recent years from other countries.

AREA AND POPULATION.

The area is about 150,000 square miles and the population is a little less than 4,000,000. The last census estimated it to be 3,500,000. The chief industries of the Empire are the rearing of cattle, sheep, and goats and the cultivation of barley, dhurra, wheat, hops, and tobacco for home consumption.

The chief interests connecting Abyssinia with the outside world are the powerful influence of the Negus and the possible later connections with the interior of Africa through instrumentalities in his possession. The French, English, and Italians have for a long time been carrying on correspondence with the Negus with the view of developing the industries of these countries.

EXPORTS TO ABYSSINIA.

Export, a German trade paper, in its issue of November 5, 1903, says:

Through the completion of the Djibuti-Addis Harrar Railway, Ethiopia (Abyssinia) was opened to the trade of the world. This is the first railway from the French port of Djibuti, on Tadschura Bay, to Addis-Abeba, the capital of Abyssinia, and to Kaffa and the upper Nile. Exports of Abyssinia last year were as follows:

Coffee.....	\$850, 374
Gold	460, 054
Ivory.....	404, 838
Civet.....	80, 920
Rubber.....	12, 138

The well-developed political system under which Ethiopia has been progressing during the last dozen years, its success in foreign wars, and its firm position in the face of the outside world permit the long-concealed riches of this beautiful and singular country at last to be exploited. The Hamites and Semites, who formerly

wandered into the land from Asia, as well as the mixed elements of its existing population, far surpass in intellectual powers the negro races. They possess an old, although backward, culture, but they are not opposed to European civilization. They have adopted the telegraph, telephone, and quick-firing weapons, and they are well equipped to become buyers of imports. The imports of Abyssinia have increased from \$83,300 in 1880 to \$3,350,000 in 1899-1900 (October, 1899, to April, 1900). During the entire fiscal year 1899-1900 the total imports must have reached \$4,522,000. Imports were divided as follows:

Great Britain and British India.....	\$1, 171, 912
Including—	
Cotton goods.....	\$1, 051, 960
Woolen goods..	89, 488
Silk goods.....	8, 568
United States.....	850, 374
Including cotton goods.....	\$847, 280
France	271, 796
Including—	
Weapons.....	\$183, 260
Silk goods.....	74, 256
Germany.....	236, 810
Including silk goods.....	\$163, 506
Austria.....	91, 154
Including glassware.....	\$14, 280
Arabia, Belgium, China, Japan, Russia, and Turkey.....	755, 412

The goods imported into Ethiopia are as follows: American, English, and Indian cotton goods; iron goods, including enameled wares, cooking utensils, and hardware of all kinds; wines and liquors; glassware, especially for arm bands, etc.; drinking glasses; hats; candles; church ornaments, as crosses, etc.; copper utensils, lamps, groceries, preserves, olive oil, medicines, writing paper, cigarette paper, perfumery, petroleum, jewelry, leather, arms and ammunition, shoes, silk goods, looking-glasses, chairs, tobacco, carpets, watches, soap, sugar, wood; woolen goods, including cloths; thread and yarn; razors, cutlery, Italian and Swedish matches, and Turkey red.

Trade is carried on almost exclusively in the dry season—September to June.

It is interesting to note in this connection that Mr. R. P. Skinner, United States consul at Marseilles, France, has been sent by the United States Government on a mission to the King of Abyssinia for the purpose of extending American trade in that country.

DESERTION OF SEAMEN FROM AMERICAN SHIPS AT BUENOS AYRES.

(From United States Consul Mayer, Buenos Ayres, Argentine Republic.)

I attribute the unusual number of desertions to the law of December 21, 1898, which reads:

Every seaman on a vessel of the United States shall be entitled to receive from the master of the vessel to which he belongs one-half part of the wages which shall be due him at every port where such vessel, after the voyage has commenced, shall load or deliver cargo before the voyage is ended *unless the contrary be expressly stipulated in the contract.*

In my opinion, which is based upon observation, if the words in italics were not in the contract desertions would not be so numerous, for the following reasons:

Most of the American vessels coming to this port sail from Boston, Mass. There the shipping articles are signed by the seamen before the United States shipping commissioner. On the front page of said articles toward the bottom of the page, I find in almost all shipping articles, the following words stamped, "No money to be advanced during the voyage." As a rule it takes from sixty to seventy days for vessels to reach this port. The seamen, once the vessel is in port, will ask permission from the master of the vessel to go ashore, which permission is granted for twelve hours. He will ask for some money, which is refused, the master of the vessel claiming that the shipping articles which the seaman signed provide that no money is to be advanced during the voyage. The seaman goes ashore without a dollar in his pocket; he falls in with runners of boarding houses and shipping masters, by whom he is taken care of by being provided with liquor and eatables. In many cases the seaman gets intoxicated and does not return to his vessel, and, at the expiration of the forty-eight hours from the time his permission to go ashore ceases, the master promptly reports him a deserter.

The vessel remains in port discharging and receiving cargo for about two months, and as the seaman has little or nothing to do—the cargo all being discharged by stevedores—by the seaman deserting the master or ship saves the wages, and I never knew of a master who worried about a deserted seaman. The shipping master takes hold of the deserter and soon finds another vessel for him (not an American vessel) and collects one month's allotment for board due him by the seaman. The ship saves from two to three months' wages by the seaman deserting. The shipping articles further provide that these seamen ship for from twelve to eighteen calendar months, and the first time they learn they can draw no wages is when they ask the master for money when the vessel is in port, and it is hardly to be expected that they will stand by their ships when they can be kept out of their wages for twelve to eighteen months.

Another reason why seamen desert is on account of the following words also being stamped on the shipping articles: "The crew are to handle all cargoes and ballast required." Of this the seamen are ignorant until they are put to work by the stevedore, who pays the ship \$1 a day for every seaman who assists in discharging the ship, and as soon as the seamen are aware of it desertion follows.

Another cause of desertion is the following: As soon as a vessel is towed into the port, and before she gets to her discharging berth,

boarding-house keepers and runners board the vessel in boats and mix among the crew, without any objection from the master of the vessel, and as a rule the seamen desert the vessel as soon as she is moored. I repeat what I stated above, that the masters of these vessels have never yet complained at this consulate of losing their seamen, and in most cases it is my opinion that it is just what they want.

On the 23d day of June, 1884, a treaty was consummated between the United States minister and the Argentine Government to arrest deserters from American merchant and war vessels. This treaty was confirmed by the Argentine Congress, but not by the United States, and it is my opinion that if this treaty were made effective desertions would be very few, if any.

D. MAYER, *Consul.*

BUENOS AYRES, ARGENTINE REPUBLIC, *October 24, 1903.*

AGRICULTURAL IMPLEMENTS AND CONDENSED EGGS IN SOUTH AFRICA.

(From United States Consul-General Guenther, Frankfort, Germany.)

The Welthandel (World's Commerce) states that Mr. Henry Birchenough, who was sent to South Africa as commissioner by the British Board of Trade, calls attention to the favorable opportunity in the Orange and Transvaal colonies for the sale of agricultural implements and cheap farm utensils.

The agricultural development of these colonies will be tremendous as soon as the projected railroads are completed, and, as the colonies have to start over again, there is now and will be a great demand for light plows, harrows, creamery utensils, etc.

The Americans and Canadians, says Mr. Birchenough, have recognized this already and are trying hard to secure as large a share as possible of this commerce.

The commercial agent for Canada in Johannesburg, Mr. James G. Jardine, has already sent a report to his superiors and refers to the report of Mr. Birchenough. He also states that South Africa is a good market for condensed eggs, as fresh eggs are from 3s. 6d. to 7s. 6d. (85 cents to \$1.82) per dozen. Condensed eggs are prepared from ordinary eggs by depriving them of their superfluous water and adding sugar. When being prepared for use, some water is added and the mixture quickly beaten; it can then hardly be distinguished from fresh eggs.

These condensed eggs are put up for the South African market in hermetically closed boxes, each containing from 1 pound to several pounds. A 1-pound box contains about 15 eggs.

RICHARD GUENTHER,

FRANKFORT, GERMANY, *November 7, 1903.* *Consul-General.*

EAST AFRICAN RUBBER.

(From United States Consul-General Hughes, Coburg, Germany.)

A sample of caoutchouc from the Wadruma forest, near Mombassa, East Africa, was recently laid before the English Government for examination and for the establishment of its value. The sample was a ball about 3 inches in diameter, light brown, and somewhat sticky on the surface. When broken the caoutchouc was spotted in appearance, partly whitish and partly light brown, and the interior was less sticky than on the outside. The material was slightly porous and intermixed with small particles of vegetable substances; it was very elastic and sample strips could be drawn out without tearing. At a temperature of 120° Cel. the caoutchouc partly melted.

The chemical analysis resulted as follows: Moisture, 4.2 per cent; rosin, 4.2 per cent; caoutchouc, 87.7 per cent; and waste, 3.9 per cent (2.5 per cent ashes is included in the waste). These figures show that the sample is of very good quality.

In order to establish its price, the sample, with the result of the chemical examination, was placed before several caoutchouc brokers, who declared it to be a fine, hard, and well-selling raw caoutchouc, worth in a dried state 61 to 62 cents a pound at the London warehouses.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *October 28, 1903.*

Consul-General.

AFRICAN TRADE NOTES.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

Imports into the Orange River Colony.—The imports into the Orange River Colony during the year ended June 30, 1903, amounted to £2,459,683 (\$11,970,047), an increase of £1,389,518 (\$6,762,090) as compared with the imports during the preceding year.

Chinese coolies in Africa.—The importation of Chinese coolies to work the mines of South Africa is now assured. This will give a great impetus to trade in the mining regions.

Cotton from Dahomey.—The first consignment of cotton (1,325 pounds) raised in the French colony of Dahomey has recently been received in Havre. French manufacturing and commercial circles hail this as the first sign indicating the eventual emancipation of France from dependence on the United States for cotton supplies.

New sewerage system in Pietermaritzburg.—The municipality of Pietermaritzburg, colony of Natal, South Africa, is taking up a loan

of £490,000 (\$2,384,585) to be expended for a new sewerage system. The remarks accompanying my late report of the inauguration of a new sewerage system by the city of Johannesburg, as offering an opportunity for American plumbing and toilet articles, receive additional force from this Pietermaritzburg item.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 23, 1903.*

AUSTRALIAN EXODUS.

The Colonizer, a London journal devoted to colonization and immigration, in its October number prints the following from the Globe:

The steadily increasing number of departures from New South Wales and Victoria for Canada, South Africa, and even Great Britain is beginning to awaken alarm in the Commonwealth. The steamers of the White Star and other lines are continually leaving Australian ports with full passenger lists, and nearly the whole of the passenger accommodation has been booked for several weeks to come. During the first six months of the present year, according to official reports, no fewer than 16,327 persons left New South Wales alone for ports outside the Commonwealth, the emigration exceeding the immigration by 2,116. In addition, there has been a large influx of New South Wales and Victorian population into Western Australia. This is one of the immediate effects of Socialist Labor legislation in the Mother State and Victoria. The people who are leaving Australia are no mere birds of passage. They are mostly a class who have been born or long settled in Australia, many being steady, competent tradesmen; not a few belonging to the ranks of master craftsmen, others being pastoralists, farmers, station hands—in fact, the very men of which the Commonwealth stands in most need. Scarcely any are trade-unionists. The nonunionist, under the new order of things, has no place in Australia. The New South Wales industrial arbitration court and the Victorian wages boards each refuses to recognize his existence. He must either join a trade union or—starve.

In the New South Wales provinces the population during the decade 1891–1901 has remained almost stationary, or has shown only a limited increase, while during two succeeding years there has been a marked decline. Well may it be said that these facts afford a scathing commentary on the Socialist Labor policy of the existing State government. “Here,” we are told, “is a country whose State industrial institutions are now run solely in the interests of the worker; whose politicians leave no stone unturned to meet his every demand; in which, out of all countries in the world, it might be thought that labor had found its elysium; and yet the working man, as well as his employer, finds he can not make a living in it.” Not in a land capable of supporting the whole of the European populations several times over! The Socialist Labor Party is the declared enemy of private enterprise and free labor. Only within the last two or three days a deputation waited on a member of the State ministry, in place of the State premier, who was absent, to ask that the manufacture of wire netting might be included in the list of

State industries, and received a sympathetic reply. If a State wire-netting factory is established all the private works must be closed. It is the same with the docks. Private enterprise is ready to supply the port of Newcastle with some dock accommodation urgently required, but the Socialist Labor Party insists that it shall be provided at the cost of the State, and when it is pointed out that further State loans will be difficult to obtain the reply is: "Increase the taxation on capital." No wonder the capitalist as well as the laborer is anxious to leave a country in which they are treated as enemies of the public welfare.

How different was the situation a few years ago, previous to the advent of the Socialist Labor Party in State and federal politics. As Mr. Reid, the leader of the federal opposition, lately pointed out, Australia is the only new country in the world which was not attracting population. Between 1861 and 1891 the additions to the Australian population had been between 700,000 and 800,000, but during the last ten years the excess of arrivals over departures had been only 5,000. At this rate of progress it would take one thousand two hundred years to reach the level attained ten years ago. In the one State (Victoria) where there had been the most legislation to make the country happy, in the one State in which there had been all these efforts to do justice to the working people—wage boards and taxes to promote colonial industries and so on—people had cleared out of it more extensively than they had out of the other five States. In the last ten years Victoria had lost 110,000 people. Official statistics show that the excess of emigrants during the period 1891–1901 was as follows: Victoria, 112,579; South Australia, 18,219; and Tasmania, 1,948. During the same period the excess of immigrants was: Western Australia, 130,133; Queensland, 21,221; and New South Wales, 9,423. With the commencement of Socialist Labor legislation under the administration of Sir John See, New South Wales began to share the fate of Victoria, and appears destined to lose the greater portion of its most capable population within the next few years unless the prohibitive restrictions on labor and capital become modified, if not removed. No wonder that thoughtful men, like the president of the Sydney Chamber of Commerce, ask, Has New South Wales ceased to attract the desirable immigrant, the man with more or less capital, or he whose sole fortune is represented by strong hands, a clear head, and a brave, stout heart?

The whole root of the difficulty is to be found in the system of payment of members, which has assisted in the creation of a low-class type of professional politicians—men of the Hyde Park demagogue species—who are rushed into the federal and State parliaments by the votes of the mob, manhood suffrage being the rule in all the States in which adult suffrage has not been adopted. Fancy the tag-rag and bobtail of London aiding in the return of members for the various metropolitan constituencies. Yet this is what takes place in Australia. Hence the heavy State borrowings of the last few years and the boast of the New South Wales minister for works that he has expended five millions in providing employment for the State workers. It is a most disquieting condition of affairs. No wonder that the new rule of Mr. Irvine was welcomed in Victoria as a factor in lessening the power of the Socialist Labor Party; but much of his work is neutralized by the subserviency of the federal prime minister, Sir Edmund Barton, and the New South Wales premier, Sir John See, to the very class which, headed by men like Tom Mann, denounce the Victorian premier as the arch enemy of freedom and industrial progress.

ADVANCING TEXTILE PRICES IN BOHEMIA.

(From United States Consul McFarland, Reichenberg, Austria.)

While the early, or summer, season in cloth and woolen goods appeared to be fairly satisfactory and to have benefited somewhat from the disorganized condition of the cotton market, the present outlook for the winter season is not encouraging. Indeed, three of the largest woolen-goods factories in Reichenberg announce a decrease of production and curtailment of time, and cloth factories are preparing to follow suit if market conditions do not improve. It is claimed that within two years, and recently stimulated by high cotton prices, the prices for wool and wool yarn have increased 30 per cent, while the prices for finished goods have remained practically stationary. The trade now seems to be well stocked and customers refuse to pay advanced prices, while factory stocks continue to increase.

The president of the Austria Cotton Industrial Club also recently announced an advance of 10 to 12 per cent in woven and bleached goods, and that in the season just opening a corresponding advance of 8 to 10 per cent would be demanded for printed goods. In a long statement to the public he points out that these increases are only about half the 25 per cent increase in cotton-yarn prices, and reviews the unfavorable situation of the industry.

S. C. MCFARLAND, *Consul.*

REICHENBERG, AUSTRIA, *October 28, 1903.*

THE FEDERATED MALAY STATES.

(From United States Consul-General Williams, Singapore, Straits Settlements.)

A very rapid advance of the people of the Federated Malay States under the general direction of Sir Frank A. Swettenham, governor of the Straits Settlements, can be reported.

The establishment of a limited control by the British Government over these States was owing to the efforts of Governor Swettenham, who has passed his life in these parts and is perhaps the most accomplished English Malay student in the Orient.

Step by step has judiciously been taken by the governor until last month the sultans, datos, and other chiefs, who formerly settled their difficulties by war on land and by piratical expeditions on sea, met in convention at Kwala Lumpur, in Selangor, under the chairmanship of Governor Swettenham as high commissioner, and

discussed regnant issues in as dignified a manner as shown in the congresses or parliaments of civilized nations.

The following, published September 25 in the Singapore Free Press, exhibits the progress made, and is a most interesting document, because these people are Malays, like the Filipinos, and are making great progress in all that tends toward civilization.

O. F. WILLIAMS, *Consul-General*.

SINGAPORE, STRAITS SETTLEMENTS, *September 26, 1903.*

GOVERNOR SWETTENHAM'S ADDRESS TO THE CONVENTION.

[From the Singapore Free Press.]

Planting enterprise in the Federated Malay States has not hitherto proved very successful. The prospects of rubber are so good that unless some unforeseen disaster happens the future is full of promise for those who have taken up this cultivation. The area at present under rubber (principally the Para variety) is given approximately at 16,000 acres. The sugar estates have done well and will continue to earn fair profits so long as their machinery and methods of treatment are kept up to date. Over 40,000 acres of land are under cocoanuts, for which the soil and climate of those States are peculiarly well suited, and the cultivation of rice is only a question of irrigation and labor. The great irrigation scheme in Perak is making but slow progress, which I trust will be accelerated; but the success of every form of agriculture, and of all the efforts of the government to develop the country by means of railways, irrigation, and other great public works, depends upon an adequate supply of labor. To meet the demand the Federated Malay States have endeavored, hitherto without success, to arrange for a direct line of steamers to carry Chinese laborers from Canton to the ports of the Malay States. As regards Indian labor, the government of the colony and the Federated Malay States, supported by the planters, are making every possible effort, by a new system of recruiting and by offering higher wages and other advantages, to secure an adequate supply of Indian labor. The question of creating an agricultural department to foster agricultural interests, encourage the cultivation of new products, conduct experiments, and be a general source of information for planters is now under consideration.

At the close of the year [1902] about 382,000 acres of land were under cultivation, and it may be mentioned that during the twelve months this land produced, among other things, about 14,000,000 bushels of rice (unhusked), over 100,000 cwts. of tapioca, 57,000 cwts. of coffee, sugar worth \$1,500,000, and over 20,000,000 cocoanuts.

The rainfall for the year at Taiping, in Perak, was 196 inches and the mean temperature 80.3° F.

As connected with the subject of agriculture, it should be stated that the recently organized forest department is doing good work and will become increasingly important. The forest reserves now comprise over 300 square miles, and it is very satisfactory to find that there is every prospect that the regeneration of the gutta-percha-yielding trees is secured by the abundance of young growth found in the Malay forests.

Until the present year all servants of the government have been paid in dollars, and as the history of silver has, for many years, been one of almost continuous

fall in value, compared with a gold standard, it was natural that this method of remuneration should have led to great dissatisfaction, relieved from time to time by expedients which, while never satisfactory to the civil service, were usually anomalous in their application and imposed unfair obligations upon the government. In order to remedy this long-standing grievance, a scheme of sterling salaries was prepared, and, having received your sanction, came into force on the 1st of January last. The scheme, which was drawn up with great care, provides for all the senior officers of government sterling salaries which compare favorably with those attached to similar posts in any of His Majesty's colonies, though not nearly so generous as the rates drawn by members of the Indian government service. This reform has removed the grounds of complaint and, by fixing the salaries in sterling at fair rates, may claim to have secured finality. At the same time, the cases of subordinates who, being domiciled in the East, will still draw dollar salaries were considered and their position was generally improved. The introduction of a fixed currency, based on a gold standard, will, it is reasonable to hope, further improve the position, not only of government servants, but of all classes of the community.

If I may be permitted to employ an illustration which has served me before, the history of the British connection with what now constitute the Federated Malay States may be likened to that of a neglected and undeveloped property the owners of which, recognizing their inability to deal with it, determined to call in expert assistance when the state of their affairs involved bankruptcy to themselves and danger to their neighbors.

To-day the Federated Malay States have a revenue of \$20,000,000 and an ordinary expenditure of a little over half that sum. They have 340 miles of excellent railway, yielding a good income; they have 2,000 miles of roads, over 1,000 miles of telegraphs, and schools, hospitals, prisons, water supplies to all larger towns, and an administration which comprises many capable and devoted officers. They have also a highly efficient and completely equipped regiment of Indian soldiers under British officers. They have a trade worth \$48,665,000 per annum, a credit balance of \$10,000,000, and no debt.

While all these improvements have been effected, the conditions of life for Malays of all classes, and indeed for all Easterns, have been greatly improved. I think the only loss which the Malay rajas and chiefs could substantiate would be the power to oppress. In every other respect they are gainers. As for the Malay rayat, his condition under the present régime is as much better than it was under Malay rule as it is possible to conceive. The pity is that the national characteristics of Malays make it difficult—though not, I think, impossible—for them to take full advantage of the opportunities which now lie ready to their hands. Their natural tendency is to do as little as possible, and their present prosperity is not likely to act as a spur to any form of exertion. As a people they are certainly not wanting in intelligence; but centuries of life as they led it in this enervating climate, environed by the bounties of nature, have combined to deprive them of all energy. Except in rare cases they will not take the trouble to learn when they are young, and afterwards, if they have learned, they will not exert themselves to apply their knowledge to any object which requires a sustained effort. That they possess energy is known to anyone who has seen Malays engaged in any enterprise which savors of sport. They do not mind the trouble if there is only some risk and excitement in the work. These attractions are not, however, found in the ordinary everyday life of the husbandman, the clerk, or the merchant; and government work of a higher order appears to be irksome if it entails anything like regular attendance at an office or court. The only gleam of encouragement comes from Java, the Malay population of that island being both hard working and thrifty.

The contributory causes to this result are overpopulation and the absence of minerals. If we are to wait for the same causes in the Malay Peninsula before we can hope for a similar result, the wait must be a long one. In all this, however, the Malay himself is satisfied; and, while we are anxious to see him take life more seriously, he is content with the gratification of small ambitions, and the many natural advantages he enjoys have spared him the effort to invent ideals, either of conduct or attainment.

EFFECTS OF THE COTTON CRISIS IN BOHEMIA.

(From United States Consul McFarland, Reichenberg, Austria.)

For the past eight months conditions in the cotton industry of North Bohemia have been very bad. Until February the spinners worked with a fair margin and the rise in fabric prices from the beginning of the season was a favorable factor, but from February the manipulations at New York and New Orleans resulted in a more and more demoralized market, prices for cotton going up to such an extent that yarns could not follow. That condition still prevails, it seeming to be a fact that yarn prices are now about 2 cents under the spinning margin, while the market fluctuations have had a paralyzing effect upon buyers short of stock, who were obliged to purchase or remain idle. Under such conditions the acceptance of orders for the future has been necessarily hazardous, and many contracts have been filled at serious loss. Present conditions, as compared with those of last and previous years, are therefore worse. The curtailment of product is a difficult matter for even experts to estimate, but over 5,000 power looms are said to be idle in Bohemia alone. Only one mill has been obliged to stop work entirely, the others continuing operations as best they may, hoping at least for a steady market in the future, to which operations can be gradually adjusted. One result of the situation has been to direct attention sharply to the methods of American market manipulators, and some very bitter comment finds its way into the newspapers. An increased consumption of East Indian and Egyptian cotton is noticeable in the trade, two-thirds of the annual consumption of about 318,000,000 pounds being usually of American cotton. Public journals advocate that steps be taken to follow the examples of the Governments of Germany, France, and England, in the encouragement of cotton growing in Africa and elsewhere, in order to secure relief from American control of the market, but from such experiments no immediate relief can of course be expected. It is interesting to note that the new American baling methods, viz, the "roundlap" bales of the American Cotton Company and the "Lowry" bales of the Planters' Compress Company, have been especially well received by the trade. The district agent here,

Herr Franz Herman, reports that the output of yarn spun out of the new bales proves up to 2 per cent better than out of the square bales, while there is an advantage in convenience, freight, and insurance.

S. C. MCFARLAND, *Consul*.

REICHENBERG, AUSTRIA, *October 17, 1903.*

NEW SUGAR BONUS IN HUNGARY.

(From United States Consul Chester, Budapest, Hungary.)

The Brussels convention having declared, through a subcommission, that the State sugar-subsidy laws of Austria and Hungary were contraconventional in their provisions, the Government of Hungary found no other means of defending Hungary's consumption against the surplus production of Austria than the 71 cents surtax per 220.46 pounds agreed to by the Austrian Government as an interstate tax payable at the time of shipment from the one State to the other.

Up to August 31, 1903, the State premiums on exported sugar were in force, and in the internal trade the refineries assured a fixed price to the raw-sugar factories and paid to the said factories in cash any difference in comparison with the quotations in Aussig.

Since September 1 the Hungarian sugar concerns have been trying to establish a private system of bonification to take the place of the forbidden State subsidy represented in Hungary's Law II of 1903. On the 20th of this month (October) a meeting will be held at which the sugar concerns will sign the trust agreement for three years. If notice of termination is not given one year before the end of that term, the agreement will remain in force two years longer. The substance of the agreement is that the internal consumption, equal to 86,000 metric tons, be proportionately divided among Hungary's 5 refineries and 15 raw-sugar factories. Each refinery will have in its charge a certain number of neighboring raw-sugar factories contracting separately to sell the latter's production of sugar. Over and above this control of the raw-sugar factories, the 5 refineries under the leadership of the Hungarian General Credit Bank, in Budapest, will support a central bureau of sale, through which all Hungarian sugar will come on the market at prices fixed from time to time. These prices will depend on the arrangement not yet fixed upon with Austria's sugar concerns, which are threatening to flood Hungary with 16,000 metric tons yearly unless they are given some share in the profits of the new Hungarian trust.

According to the published report of Messrs. Wertheimer & Frankl, of this city (Budapest), the Hungarian factories have succeeded thus far in exclusively supplying the home market with refined sugar, as the Austrian factories will not be ready with their new product, especially loaf sugar, before November. The struggle between Hungary and Austria will continue, they think, for some time, though the prices of all refined sugars have fallen \$1.32 per 220.46 pounds. Present prices are, per 220.46 pounds: Loaf, \$14.21; cut, \$14.61; granulated, \$14.

The amount of premium sugar exported from the lands of the Hungarian Crown during the years ended July 31, 1902 and 1903, was as follows:

Year.	Over 99.3 per cent.	Under 99.3 per cent.
	<i>Metric tons.</i>	<i>Metric tons.</i>
1902	146,844	17,981
1903	141,134	80,261

The amount of raw sugar exported from Hungary to the United States during the calendar years 1901 and 1902 was 14,027 and 8,568 tons, respectively.

During the first eight months of 1903 no sugar was exported from Hungary to the United States.

FRANK DYER CHESTER, *Consul.*

BUDAPEST, HUNGARY, *October 19, 1903.*

TRAFFIC ON BELGIAN STATE RAILROADS.

(From United States Consul Roosevelt, Brussels, Belgium.)

According to latest statistics, from January 1 to October 10, 1903, the Belgian State railroads employed upon its lines 4,026,505 cars, of which 1,081,524 were used for the transportation of coal and coke, 2,561,304 for merchandise of various character, and 383,677 for passenger traffic.

For the corresponding period of 1902, the number of cars employed was 3, 805,061 and in 1901 only 3,720,396. The increase in total traffic for the above-mentioned period in 1903 is about 6 per cent as compared with that of the corresponding period of 1902.

Owing to the continued increase in number of travelers over the Belgian railroads, the Government has recently decided to considerably enlarge its factory for the manufacture and printing of railroad tickets, and to increase the space now devoted to the sale of tickets in all the railway depots throughout the Kingdom.

Mr. Liebaert, Minister of Railways, has just sent Mr. Ernest Gérard, inspector-general of railways, and Messrs. Lhoest and Molte, engineers, to Berlin to carefully follow experiments now being made between Berlin and Lassen on the electric road, where trams have recently been run at a rate of speed exceeding 200 kilometers (124 miles) per hour.

GEO. W. ROOSEVELT, *Consul*.

BRUSSELS, BELGIUM, *October 16, 1903.*

BELGIAN GLASS TRUST.

(From United States Consul-General Guenther, Frankfort, Germany.)

The Cologne Gazette is advised from Charleroi, Belgium, that a Belgian glass trust has been formed. This is the result of propositions made to Belgian glass manufacturers about two years ago by an American syndicate which wanted to acquire all the Belgian glass works at a certain price, allowing the Belgian manufacturers an interest in the new enterprise.

Now the Belgians have determined to exclude the Americans and to leave it to a committee to fix prices and distribute orders for a term of six years as a starter.

If this is a success, then the glass manufacturers will form a company with a capital of 60,000,000 francs (\$11,580,000), of which a part will be distributed among the members, the other part to be used as working capital. The association is to be subject to the determinations of a committee with reference to selling prices, purchasing raw materials, and fixing wages. The by-laws of the association have met with the approval of all the manufacturers except one.

Other industrial circles urge interested parties not to place too high hopes in this trust plan, for, as formerly, the selling prices will be influenced by German, French, Italian, English, and American competition. If the result would be to get better prices in Belgium, similar enterprises would be created competing with the trust. The German glass works some years ago established a single sale station and accomplished a rise in prices for the home demand. Then the Belgian company "Glass Nationale Belges" established works at Porz-Urbach, near Cologne, which successfully competed with the German glass syndicate.

A new American mechanical-blowing process is furthermore likely to cause a complete revolution of the entire mode of manufacture, which may affect the business of the proposed trust. It is easily

comprehended, the correspondent states, that the owners of glass works are looking for ways and means to escape the "tyranny of the socialistic labor unions," but whether this will be accomplished by this trust is yet greatly doubted.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *November 5, 1903.* *Consul-General.*

AMERICAN INDUSTRIAL CAPITAL IN HAMILTON, CANADA.

(From United States Consul Shepard, Hamilton, Canada.)

The cheap electric power furnished by the Cataract Power Company is a determining inducement for manufactories to locate here. This power is generated at Decew Falls, a point 34 miles southeast of Hamilton and about 10 miles from Niagara Falls. The water has a descent of 280 feet, and is equal to furnishing all the power that may be needed even in the distant future. The utilization of this waterfall should suggest to capitalists in the United States the advantages offered in so many places in our own country where such power is going to waste.

The protective duties in force in Canada make it an object for American capital to invest in manufacturing here. The International Harvester Company, the Deering branch of which is now completing a plant in this city for the manufacture of all kinds of farming machinery and implements, is not only the largest manufactory in any line in Canada, but also the largest of its kind under the British flag. Its buildings already cover a space of 35 acres.

The Westinghouse Company, of Pittsburg, Pa., has for several years had a branch manufactory in this city for the making and applying of the Westinghouse air brake. This company has had plants in several Canadian cities, and, in order to consolidate its industries in a single locality, has organized the Canadian Westinghouse Company, with a capital stock of \$2,500,000, the incorporators meeting in this city October 8, 1903. The principal officers elected were: George Westinghouse, president; H. H. Westinghouse and Frank Taylor, vice-presidents; and Paul J. Myler, general manager and treasurer—all of Pittsburg. The company will do a general business in the manufacture of electrical appliances, and as soon as new buildings can be erected here and machinery installed it will give employment to not less than 1,000 hands.

The Pittsburg Steel Company is completing arrangements to establish a branch of its business in this city, and to make a beginning the managers have leased from the Hamilton Nickel-Copper

Company its large refinery buildings. This lease is only for one year, in order to give the company time to erect buildings of its own, for which a large tract of land has already been secured.

Edward Elsworth & Co., of Buffalo, manufacturers of cereal foods, have established a branch here this year and are employing 80 hands with a daily output of 800 cases (28,800 packages) of "force." They have a large export trade, mainly to Great Britain, and are arranging to double their capacity this winter and add the production of "H. O. oatmeal."

The International Harvester Company, the Westinghouse Company, the Pittsburg Steel Company, and the Elsworth Company are new enterprises here and, when in full operation, will give work to from 6,000 to 8,000 hands. The Hamilton Iron and Steel Company, of which the blast furnace is an important factor, has been adding to its facilities. It owns its steam lake vessels to carry ore from the mines to the furnace. The Canadian government pays a high bounty on all iron made from Canadian ore and a smaller bounty on a mixture of United States and Canadian ore. The furnace and steel and iron mills are built on the bay front and the company owns its wharves.

JAMES M. SHEPARD, *Consul*.

HAMILTON, CANADA, *October 30, 1903.*

FISHERIES OF CANADA.

(From United States Commercial Agent Bentelspacher, Moncton, Canada.)

NEW BRUNSWICK.

New Brunswick ranks third in the fishing industry of the maritime Provinces. The capital invested amounts to \$2,233,835. The catch of Northumberland Straits, the Gulf of St. Lawrence, and the rivers and streams emptying therein, all within this consular district (Moncton), will for the year 1903, owing to the failure of the fresh-fish catch, especially smelts, aggregate about \$100,000 less than for 1902, when it was nearly \$3,000,000. The pack of lobsters is larger. In 1902 it was about 39,000 cases of 48 pounds each, worth \$450,000; this year it amounts to over 42,000 cases, worth fully \$500,000.

Two hatcheries have been built—one at Shemogue, in this county, and one at Point Canoe, Shippegan Island, in Gloucester County. The first named was operated partially this year. Both will be fully equipped by next season, when it is expected that between 50,000,000 and 100,000,000 eggs will be hatched before the close season. The catch of smelts, owing to the weather, was about 1,000 tons less than that of last year, when it amounted to about 4,000 tons. The

catch of salmon was also below the average. Cod fishing was good, and the catch will aggregate fully 11,200,000 pounds, worth \$400,000. More mackerel were taken, and immense quantities of spring herring, many of which are now smoked at Pointe du Chêne, Bay Verte, etc. About the usual quantities of oysters were raked, and a larger supply of hard-shell clams (quahaugs), which are shipped in carloads to the United States. Several thousand barrels of soft-shell clams were canned, and the catch of shad, gaspereau, trout, halibut, and other kinds of fish was about as usual.

ALL CANADA.

The total capital invested in the fishing industry in Canada is put at \$11,491,300, divided among the Provinces as follows: Nova Scotia, \$3,319,344; New Brunswick, \$2,233,825; Prince Edward Island, \$425,589; Quebec, \$954,661; Ontario, \$75,921; British Columbia, \$3,360,082; Manitoba and the Northwest Territories, \$446,888—an increase in capital invested of \$501,175 as compared with that of 1902. The number of men engaged in the industry was 78,290 and the value of the total catch was \$25,737,153, an increase of about \$4,000,000 over the previous year and by far the largest amount in the history of this industry.

GUSTAVE BEUTELSPACHER,
Commercial Agent.

MONCTON, CANADA, *September 19, 1903.*

PULP WOOD IN CANADA.

When the pulp-wood problem and the possible policy of his department was under discussion in the legislative assembly of Quebec, the Hon. S. N. Parent, prime minister, answered the arguments advanced by those opposed to the continuation of the policy of the government. Unusual interest was aroused by the minister's opposition to an increase in the export duty on timber and its products, to be in force until 1910. By an order in council, dated August 17, 1894, the duty on pulp wood was advanced from 25 cents to 40 cents a cord, while a reduction of 15 cents a cord was made on wood manufactured in the Province of Quebec. Opposition to this led to a change that put the duty at 40 cents a cord without distinction. On January 18, 1900, an order in council was passed putting the duty at \$1.90 per cord, with a reduction of \$1.50 per cord on wood manufactured in the Province. June 1, 1901, the government put the duty at 65 cents a cord of 128 cubic feet, with 25 cents off when

the pulp was manufactured in the Dominion. There are parties in Canada who advocate the higher schedules in order to make it more difficult for Americans to obtain Canadian woods for pulp. Among other things Mr. Parent said:

It is claimed that the Americans would pay \$1.90 per cord just as willingly as they would pay 65 cents, because they are in need of our wood. This might be the case were it not possible for them to obtain a supply from the holders of lots under letters patent, from the seigneuries, from New Brunswick and Nova Scotia, and even from Ontario, at a lower price. We must not lose sight of the policy of retaliation, which in the hands of the Americans might prove a serious menace to the exportation of pulp from this Province. The same conditions might prevail with regard to manufactures. We shall never be able to force the Americans to open up manufactories in our midst so long as it is possible for them to obtain raw material elsewhere than from our Crown lands.

Before I dispose of the American question, it may not be inopportune to dispel an illusion under which some people appear to be, or would have us believe that they are, to the effect that the Americans are at the mercy of the Province of Quebec, or rather of Canada, for their supply of pulp wood. This is a great mistake, and I here offer the proof.

According to statistics taken from the last census of the United States, 1,986,310 cords of wood were consumed for the pulp and paper industries of that country in the year 1900. Of that amount 369,317 cords came from Canada. That is only 18.58 per cent, or less than one-fifth.

Moreover, the United States has a forest reserve of 1,094,496 square miles, which is equal to 37 per cent of the country, not including Alaska.

The Canadian pulp wood exported to the United States is used up to supply a certain number of mills which are not far removed from the frontier. Others take their supply in the United States. Are we to suppose that there is no more wood in those large States? Take Maine, a State which is very close to us, and let us see.

According to the report of the forest commissioner of that State, published on the 9th of January, 1903, there are actually in the forests of Maine 21,239,000,000 feet of spruce, not including a large quantity of cedar, poplar, etc.; and according to the report of Mr. R. S. Hosmer (United States Bureau of Forestry), the annual growth in the forests of Maine is sufficient to allow, without any danger of exhausting the forests, the cutting of 637,000,000 feet of spruce annually, while the mills actually in operation do not use up more than 295,000,000 feet. Seventy-nine per cent of the State of Maine is in forest.

I have spoken of the forests of Maine because they are close to us, but statistics to the same effect exist in respect to the States of Michigan, Wisconsin, Minnesota, Oregon, etc.

The American, then, has at home the raw material and is not at our mercy. This is not all. They have, besides, the forests of New Brunswick, those of Nova Scotia, and particularly those of Newfoundland, which it is almost impossible to exhaust. They also have Ontario, which, notwithstanding what has been said, supplies a large quantity in addition to that which the proprietors of lots under letters patent and seigneuries can supply in the Province of Quebec.

No, we have not unduly alienated our domain, but we have endeavored to derive as large a profit as possible from our resources. What, then, do our opponents wish us to do with all this wood, which is only fit for the pulp industry? Perhaps they desire us to wait until a material is discovered which might take its place or until a new method has been adopted? The American Lumberman of February 21,

1903, announced the opening of a large paper factory in Orange, Tex., which employed for its raw material the waste pieces of yellow pine, which is found in very large quantities in the Southern States. This new factory buys this waste material at \$1 per ton and has already sufficient to supply its mill for one year. The Southern States will therefore be able to do without northern spruce in the future, which costs them \$12 per ton, and an immense market is thus lost for our pulp wood. Besides this, the United States produces cotton, hemp, jute, Indian millet, and corn, all of which contain fiber suitable for paper; and it is rich in pulp wood, concerning which Professor Sargent, in the Tenth Census of the United States, describes numerous kinds—for example, marsh pine, fir, aspen, birch, sweetgum, cotton, maple, cypress, and willow. I have in my possession in the lands department samples of fine paper manufactured from corn and from yellow-pine waste; also samples of pulp made of rice straw and of bagasse. The whole question consists in finding economic methods of converting these materials into paper pulp. Even as late as last year 99 per cent of the manufacturers maintained that it was impossible to make pulp from yellow pine. The success of the Orange Company, which to-day supplies the paper from which the Southern papers are printed, proves the manufacturers were wrong. How do we know that our ingenious neighbors will not discover something new in the near future. To refuse to sell our pulp wood under the pretext that our rivals will always have need of it would be positive folly. It is a manna which passes, but will not always remain. Our policy is to benefit by it while it lasts, for before long it may possibly be too late.

Again, were the American market closed to us, we should only have the European market. Now, what is the situation at this moment? The prices in Europe for pulp wood are weak and the manufacturers of Norway and Sweden—our competitors on the English market—were compelled to limit their production to a considerable extent; and our opponents desire that we prohibit exportation of raw material to the United States at a moment when the demand from Europe is decreasing, and thus take away from thousands of settlers an industry from which they derive a good revenue. This would be a fault which the government will not commit.

POTATO CROP OF ONTARIO.*

(From United States Consul Gunsaulus, Toronto, Canada.)

The acreage of potatoes in Ontario for the present year, according to advices received by me from the deputy minister of agriculture for the Province, was placed at 138,011, being 6,722 acres less than in 1902. The prospects, when correspondents reported in August, were that a big yield, comparatively, would be realized this season, so the total product may be estimated as being greater than that of last season. The average yield of potatoes in this Province for the last twenty-one years is given as 115 bushels to the acre.

According to the crop report issued August 1, 1903, potatoes promised to be one of the best yields for years, more or less favorable accounts coming from nearly all of the counties in the Province.

The plan of potato cultivation common in Ontario is practically the same as that in the States of New York, Michigan, and other

* This report was prepared at the request of a Michigan manufacturer of potato machinery, to whom an advance copy has been mailed by the Bureau of Statistics.

contiguous States. The crop usually follows clover sod, which is plowed late in the fall, the land being harrowed, cultivated, and gang plowed in the spring. Planting takes place in May, within a range of three or four weeks.

The acreage and yield, together with the market value of the potato crop for the years 1892–1901 in the Province of Ontario, were as follows:

Year.	Area sown.	Yield.	Yield per acre.	Market value.	Market value per acre.
	<i>Acres.</i>	<i>Bushels.</i>	<i>Bushels.</i>		
1901	154,155	18,116,637	118	\$7,717,687	\$50.06
1900	163,754	21,476,439	131	5,605,351	34.23
1899	168,148	19,933,366	119	6,538,144	38.88
1898	169,946	14,358,625	84	6,332,154	37.26
1897	169,333	16,100,797	95	6,424,218	37.94
1896	178,965	21,305,477	119	5,582,033	31.19
1895	184,647	29,390,854	159	5,936,959	32.15
1894	167,253	17,163,130	103	6,075,748	36.33
1893	142,601	12,911,212	91	5,099,929	35.76
1892	145,703	12,289,817	84	6,194,068	42.51

E. N. GUNSAULUS, *Consul.*

TORONTO, CANADA, *November 6, 1903.*

BRITISH NAVAL STATION AT ESQUIMALT.

(From United States Consul Smith, Vancouver, British Columbia.)

The strength of the British fleet at Esquimalt naval station has been reduced, so that now, besides the flagship *Grafton*—a first-class cruiser—only two second-class cruisers and two steam launches for use of engineers are stationed there. In consequence of this reduction, on the term of the present admiral expiring in December, he will then be succeeded by a commodore, who has already been appointed and is expected to assume his duties when the admiral vacates. But while the fleet has been reduced, the strength of the station has really been increased. Large 9.2 guns, weighing, with their equipment, 30 tons each, arrived lately from England and were placed in position at top of Signal Hill, which commands the whole harbor. These guns are said to throw a 380-pound projectile 5 miles, and with an elevation of 15 feet they have a range to exceed 7 miles. The guns are said to have cost \$26,000 each. They throw the projectile from the muzzle at the rate of 2,347 feet per second and punch a hole in 18 inches of wrought iron at a range of 3,000 yards.

Another work to improve the Esquimalt defenses, now approaching completion, is the installation of a battery of quick-firing guns in the navy-yard, and covering the entrance to Esquimalt harbor, where extensive mines have been laid. It is reported that the work of constructing a fort on the high bluff overlooking "Royal Roads" (as the approach to the harbor is called), which was planned some years ago by a royal engineer, is soon to be commenced. Recently, additional ground was purchased by the imperial authorities and plans were prepared for large and modern magazines, in a sheltered and concealed location, separate from the other buildings. This shows the intention to keep a still larger supply of munitions on hand. Reports are also current that an enlargement of the naval dry dock is contemplated. The present dock will barely accommodate the present flagship and is entirely too small to dock a modern battle ship.

ABRAHAM E. SMITH, *Consul*.

VICTORIA, BRITISH COLUMBIA, *November 9, 1903.*

SAULT STE. MARIE LUMBER OUTPUT.

(From United States Commercial Agent Skotts, Sault Ste. Marie, Canada.)

The cut of lumber in this district for the season of 1902 was about 160,000,000 feet, and the cut for the season of 1903 is expected to total over 200,000,000 feet. At least 75 per cent of this is cut in mills owned and operated by Americans. Two large sawmills have been built during the year and a new veneering mill has been operating very profitably during the season.

The largest portion of the lumber cut by these mills was shipped to the United States, amounting in 1901-2 to \$1,604,123 and in 1902-3 to \$1,941,985, an increase of \$337,862. The total value of manufactured and unmanufactured timber shipped to the United States during the year 1901-2 was \$2,243,014, and the shipments for 1902-3 amounted to \$2,518,292; of this only \$314,165 and \$80,222, respectively, was raw material—that is, saw logs and pulp wood—being \$232,943 less for 1902-3 than for the previous year. The increase has been wholly in manufactured articles, being \$509,221, and this increase in the exports of manufactured articles and decrease in the shipments of raw material is likely to continue from year to year, as the policy of the Canadian government for some time has been to discourage the shipment of raw material and to encourage home manufacture as much as possible. To this end from time to time it has either placed an export duty on raw products or entirely prohibited their shipment. The policy in the Province of Ontario is to prohibit entirely such shipments, and was first applied to saw

logs taken from Crown lands and then extended to apply to Indian lands. This was followed by the prohibition of the shipment of pulp wood, and later tan bark taken from Crown and Indian lands was included.

GEO. W. SHOTTS,
Commercial Agent.

SAULT STE. MARIE, CANADA, *October 26, 1903.*

INCREASE OF CHILEAN EXPORTS.

(From United States Consul Greene, Antofagasta, Chile.)

The following report is based upon memoranda furnished by the Chilean superintendent of customs relative to Chilean commerce and industries, particularly Chilean exports, in 1902.

Statistics of exports would seem to indicate that Chile is enjoying the greatest prosperity, but such is in fact not the case. It is true that the saltpeter industry has flourished, but industries of a permanent character have declined or made slow progress.

In making a comparison of exports the year 1879 is taken, since at that time the saltpeter region was blockaded by Chile. Before 1879 Tarapaca and Antofagasta produced about 300,000 tons annually and employed 3,500 men; now 1,280,000 tons are produced and more than 23,000 hands are employed. Those Provinces took at that time less than the tenth part of the Chilean products which they receive to-day by coasting trade.

In 1879 Chilean exports were valued at \$31,554,539; in 1902, at \$67,846,187—an increase of \$36,291,648. There was, however, a decrease in products of a permanent character to the amount of \$10,009,002, while those of a transitory character increased \$43,703,789. It may be said that the saltpeter region consumes these products. While it is true that Pisagua, Iquique, Tocopilla, Antofagasta, and Taltal receive by coast trade goods to the value of \$10,950,000, yet 90 per cent of this consists of horses and cattle, refined sugar, fruits, vegetables, shoes, wood, coal, etc., which are in no way articles of export. If the demand for saltpeter were to cease farms and factories would suffer for lack of a market for their products.

The saltpeter industry furnishes 76.4 per cent of Chilean exports, consumes about \$10,950,000 of Chilean products, and, directly and indirectly, pays about \$21,350,000 in duties to the State. It is not necessary to comment on the dangers that would arise were this industry to decline. It is not so with other American peoples. Argentina exported mineral and agricultural products in 1903 amounting to twenty times more than the saltpeter exported by Chile, and

paid national, State, and municipal taxes to the amount of \$82,125,000. These taxes seem oppressive when it is remembered that the population of Argentina is estimated at 4,500,000 and that they import goods to the value of \$109,500,000. Chile, with a population of 3,500,000, consumes \$47,540,000 of home products and only pays taxes to the amount of \$14,600,000.

Mexico has built railroads throughout her extensive territory, and with exports of copper and iron has been compensated for the decline in price of silver; her cotton factories produce enough goods for home consumption and some to spare for export. Last year there were in operation 125 cotton factories, consuming 30,000 tons of cotton and employing 27,750 workmen.

Brazil possesses immense wealth in her tropical fruits. She exported last year (1902) coffee, caoutchouc, sugar, tobacco, cotton, etc., to the value of more than \$182,500,000. These products do not pay any taxes to the General Government, but they pay taxes to some of the States. This interstate taxation is very high. In 1901 goods valued at \$96,540,653 paid taxes amounting to \$51,750,361, or 53.8 per cent. During the same year Chile paid 19 per cent, Argentina 28.27 per cent, and Mexico 17.3 per cent.

The following table shows exports and imports of Chile, Argentina, Mexico, and Brazil for 1901:

Country.	Exports.	Imports.
Chile.....	\$62,735,998	\$50,854,925
Argentina.....	164,279,900	113,236,155
Mexico.....	68,505,233	62,777,850
Brazil	197,945,374	102,291,306
Total.....	493,466,505	329,160,236

CHAS. C. GREENE, *Consul.*

ANTOFAGASTA, CHILE, *October 20, 1903.*

EFFORTS TO PROMOTE TRADE IN CHINA.

(From United States Consul-General McWade, Canton, China.)

His Excellency Tsen, viceroy of the Two Kwangs, has issued a proclamation inviting the merchants of the 72 guilds of Canton to hold a meeting for the purpose of dealing with the promotion of trade in Canton. In connection therewith, he has offered the following suggestions for their consideration:

1. A chamber of commerce should be established, every guild to be represented by a leading merchant. Constant meetings should be held, so that all disputes between merchants can be settled and all complaints can reach the ears of the high

authorities at once. Branches of the chamber of commerce should also be established in Chiu-Chow and Shiu-Hing to cooperate.

2. Inspectors of commerce should be employed to inspect all exports, imports, and native products, and all other things connected with trade.

3. There should be exhibitions of articles, native and foreign, to extend the knowledge of the chamber of commerce.

4. Men should be employed to report all the market quotations, the conditions of the market, and all other things connected with commercial business.

5. Commercial training schools should be opened.

6. The chamber should consult with merchants in foreign countries and ask them their advice as to the promotion of commerce.

R. M. McWADE,
Consul-General.

CANTON, CHINA, *October 12, 1903.*

MINES, RAILWAYS, AND COMMERCE IN CHINA.

The London and China Telegraph of October 19, 1903, contains the following article :

A great many prospecting parties looked over China's mining lands during 1902. The Government is giving its attention to the mines. The railroad connecting the mines of the Peking Syndicate with the Wei River is about ready to begin operations. The mines in Shantung, in the German sphere of influence, have hardly more than supplied enough for local consumption. French and British companies have secured concessions to mines in Fukien. No steps have been taken, thus far, to carry out the purposes of the concessions.

The building of railways has gone on apace. The year is as satisfactory as any in the history of the country. The Peihan road (Peking-Hankau) has been built into Honan from the south and has reached the borders of that Province on the north. In two years that important trunk line ought to be completed. Passengers and freight were attracted to it just as soon as it was opened. In various parts of the Empire the efforts to establish railway connections are progressing as satisfactorily as could be expected. The old prejudices of the people against railroads are giving way to intelligent appreciation of their value as aids to industrial and commercial development. An order given by the imperial court to have a line built to the Western Tombs is sure to do a great deal to destroy the last remnants of the people's opposition to railway construction. Once the State stands for the progress indicated by opening mines, building railroads, constructing telephones and telegraph lines, the last barriers to the waves of western progress will have been leveled. Those then on the ground or near by with their wares are sure to reap a rich and plentiful harvest.

In regard to China and eastern trade there are standards of conduct both in studying and supplying the people. In the first place, the field is one in which the western trader is to find western as well as eastern rivals. This will complicate the problem. Both the ordinary and extraordinary weapons of commercial warfare will be wanted by the firms that expect to enter for the purpose of building up a permanent trade. Too much must not be left to consuls or governmental commercial agents.

The men to send to the East are highly trained commercial travelers, men at least fairly, if not entirely, familiar with eastern languages. To such the consuls and commercial agents will be able to offer valuable assistance. Cooperating, there is

very little that they may not be able to accomplish. An effort should be made to open rooms for the display of western wares with parties in control able and willing to show how they work. The people who put their wares into showrooms and exhibit them carefully will garner a large part of eastern trade, at least for many of the earliest years. Catalogues, however perfect, can never do for the natives what half an hour's intelligent explanation would most certainly secure. The way to go about getting good results is for half a dozen or more firms, noncompetitors, or even competitors, to put up or hire the showrooms, appoint a capable engineer to exhibit, share all the expenses, advertise, etc., and leave the native to make his own selections. The Japanese are pursuing tactics that the West will have to emulate if it expects to stay in eastern markets. They are sending their agents out into the country districts of China and Korea armed with samples of their own and other production. The wares, if wanted at all, are sure to be ordered. It is a way that has won markets at all times in all parts of the world. The selling agencies can easily add exporting of eastern products to their list of labors. Serving as collecting agencies as well as distributing agencies they are sure to get the confidence of a very large clientele. The compradores, a kind of commission merchant and business intermediary, has hardly any *raison d'être* now. Indispensable in the days before the railway, telegraph, telephone, and post, he has outlived his time. With the prejudices against progress, he, too, should pass. For a time, till the new methods, exhibition stores, traveling salesmen, etc., have taken their places, the best elements among them may serve to aid the efforts of those having goods to introduce. There is certainly this advantage in the *compradore* system—it offers a corps of men who know the Chinese people and language. These men might be made mediators of the new system. Their activities might be utilized in the agencies. Of course, care will have to be taken in watching them, as they can hardly be expected to work very hard for the success of a system that is intended to replace themselves. Still, so intelligent is the class, the inevitable success of the new system is sure to force itself upon them. When this happens they may be as eager to aid as they now are to hinder. At all events the East has a vast market for the merchants, manufacturers, and miners of the West. Its opening up is an assured fact. Its millions will want tools, implements, and machinery, such as have helped the West to achieve success. Who will supply these? Those nations that are first to introduce intelligent trade methods, who are first to find permanent favor among the millions of China.

HEATING AND COOKING STOVES IN MEXICO.

(From United States Consul LeRoy, Durango, Mexico.)

Heating is not of so much importance here as lighting, because of Durango's splendid climate. Despite the altitude of over 6,000 feet, it is not often the thermometer goes below the freezing point at night during winter, and 24° F. is reported to be the usual minimum. In so dry an atmosphere greater cold than this can be endured without discomfort. The people here are, as usual in such countries, more inured to the cold they have than people coming even from colder climates, especially Americans, accustomed to furnace-heated houses. Most of the houses in Durango have, therefore, in the past had no other arrangement for heating than was provided by the

charcoal brasiers of brick masonry in the kitchen. If necessity arose, a rather crude charcoal brasier of metal is placed in the sitting room, warming it somewhat, but also vitiating the air. The newer houses here are now being provided with fireplaces; some few have furnaces. The American residents, who in most cases can find no houses with fireplaces, either provide them or use oil stoves. Wood stoves can be used by sticking the stovepipes out of the windows or into the courtyards; few houses have chimneys.

Anyone having a patent heater of any sort, suitable for such conditions and needed for use mornings and nights, might find an opening here, certainly with the American residents and perhaps with the native population. If burning oil, it should not be the usual crude, malodorous, and unhygienic oil heater.

Cooking stoves are, as indicated, little sold here. Charcoal is the cheaper fuel, and the people are used to the open brasiers to cook on. When the timber resources of western Durango are more developed, there may be a better market for some lines of cooking stoves.

JAMES A. LEROY, *Consul*.

DURANGO, MEXICO, *October 20, 1903.*

COMMERCE AND INDUSTRIES OF COLON AND PANAMA.

PANAMA.

The commerce of Panama amounts to about \$3,000,000 per annum, its population to about 300,000, and its area to 31,571 square miles, or nearly equal to that of the State of Indiana. These figures are compiled by the Bureau of Statistics. The statistics of population are based upon the latest official estimate, which shows the population in 1881, which was based upon the census of 1871; while the figures of area are from accepted geographical authorities and are those of the area of the "Department of Panama" of the Colombian Republic. The principal ports are Panama, on the Pacific coast, and Colon, on the Atlantic side, and these ports are visited annually by more than 1,000 vessels, which land over 1,000,000 tons of merchandise and nearly 100,000 passengers, chiefly for transfer over the Panama Railway, 47 miles in length, connecting the Pacific port of Panama with the Atlantic port of Colon.

COLON.

Colon, or Aspinwall, as it is sometimes called, has a population of about 3,000 persons. The population is composed of various elements—Spanish, Indian, negro, and a limited number of persons

from the European countries and the United States, especially those engaged in commerce and transportation and the operation of the Panama Railway. A considerable number of the population is composed of persons brought to the Isthmus as laborers for the construction of the canal and their descendants. Since the abolition of slavery in Jamaica a considerable number of blacks and mulattoes have settled on the Isthmus as small dealers and farmers, and in some villages on the Atlantic side they are said to be in the majority; as a result the English language is much in use, especially on the Atlantic side. Some of the native population have retained their customs, speech, and physical type, especially those in the western part of the Province, and claim to be descendants of the natives found in that section by the Spaniards.

Colon shares with Panama the interest in every movement—industrial and otherwise—affecting the Isthmus of Panama. Its position on the Gulf of Mexico, in the first place, and its location as one of the termini of the isthmian canal give it particular importance at this time. The year 1902–3 was one of uncertainty and doubt. If peace prevails there can be no question of the city's development, even independent of the canal. Should the canal be cut, Colon will enter upon a career of prosperity hitherto undreamed of by any of the Gulf cities, certainly by none on or near the Isthmus.

The importations at the port of Colon during the fiscal year ended June 30, 1903, as shown by the report of the United States consul, amounted to \$934,684, of which \$596,179 was from the United States, \$119,086 from France, \$118,322 from England, and \$76,386 from Germany. The figures of the fiscal year 1903 show a considerable increase over those of 1902, in which year the value of the imports at Colon was \$784,343. Of the \$614,179 imports from the United States at Colon in 1903, \$200,744 was dry goods, \$189,333 provisions, \$59,890 coal, \$38,642 lumber, \$32,900 kerosene, \$30,400 liquors, and \$31,940 hardware. The value of the importations from the United States in 1903 exceeded those of 1902 by \$160,000. The exports to the United States from Colon in 1903 amounted to \$173,370, of which \$75,432 was bananas, \$54,960 cocoanuts, \$12,472 turtle-shells, \$9,400 ivory nuts, \$6,460 hides, and \$5,924 coffee.

TRADE OF COLON.

(From United States Consul Malmros.)

The year ended June 30, 1903, shows a slight increase of importations over the preceding year, as appears in detail as to each article imported from all countries in the following tables.

Should the peace concluded in December, 1902, prove to be of some permanency, Colombia, like all countries the wealth of which consists almost exclusively of the productions of the soil, would in a few years recover from the great losses caused by the civil war and a more rapid development of commerce might be confidently looked forward to.

IMPORTS BY COUNTRIES AND ARTICLES.

The following statements show the imports at Colon by countries and articles during the years ended June 30, 1902 and 1903:

Imports during 1903.

Article.	England.	France.	Germany.	Italy.	United States.	Total.
Dry goods.....	\$80,900	\$74,890	\$39,900	\$7,090	\$200,744	\$403,524
Kerosene.....					32,900	32,900
Lumber					38,642	38,642
Liquors	10,640	20,690	6,940	8,070	30,400	76,740
Drugs.....	2,402	3,896	500	961	10,640	18,399
Hardware.....	1,900	9,650	3,046		31,940	46,536
Coal.....					59,890	59,890
Provisions.....	22,480	9,960	24,000	10,590	189,333	256,363
Woodwork					1,690	1,690
Total.....	118,322	119,086	76,386	26,711	596,179	934,684

Imports during 1902.

Article.	England.	France.	Germany.	Italy.	United States.	Total.
Dry goods.....	\$70,400	\$62,900	\$37,800	\$6,910	\$181,860	\$359,870
Liquors	19,122	22,400	7,665	7,496	24,762	81,445
Drugs.....	1,407	2,496	356	972	7,425	12,656
Hardware	2,400	10,500	2,705		31,042	47,647
Coal.....					40,675	40,675
Provisions.....	19,900	7,790	23,000	10,490	129,670	190,850
Lumber					35,850	35,850
Woodwork					450	450
Kerosene.....					15,900	15,900
Total.....	113,229	106,086	71,526	25,868	467,634	784,343

The following tables show a comparative statement of the imports at Colon from England, France, Germany, Italy, and the United States for the fiscal years ended June 30, 1902 and 1903:

Article.	1902.	1903.	Increase.	Decrease.
<i>Imports from England.</i>				
Dry goods.....	\$70,400	\$80,900	\$10,500	
Liquors and oils.....	19,122	10,640		\$8,482
Drugs	1,407	2,402	995	
Hardware	2,400	1,900		500
Provisions	19,900	22,480	2,580	
Total	113,229	118,322	5,093	

Article.	1902.	1903.	Increase.	Decrease.
<i>Imports from France.</i>				
Dry goods.....	\$62,900	\$74,890	\$11,990	
Liquors.....	22,400	20,690		\$1,710
Drugs	2,496	3,896	1,400	
Hardware	10,500	9,650		850
Provisions	7,790	9,960	2,170	
Total	106,086	119,086	13,000	
<i>Imports from Germany.</i>				
Dry goods.....	37,800	39,900	2,100	
Liquors and oils.....	7,665	6,940		725
Drugs	356	500	144	
Hardware	2,705	3,046	341	
Provisions	23,000	24,000	1,000	
Total	71,526	76,386	2,860	
<i>Imports from Italy.</i>				
Dry goods.....	6,910	7,090	180	
Liquors and oils.....	7,496	8,070	574	
Drugs	972	961		11
Provisions	10,490	10,590	100	
Total	25,868	26,711	843	
<i>Imports from the United States.</i>				
Dry goods	181,860	200,744	18,884	
Liquors and oils	24,762	30,400	5,638	
Drugs and paints	7,425	10,640	3,215	
Hardware	31,042	31,940	898	
Coal	40,675	59,890	19,215	
Provisions	129,670	189,333	59,663	
Lumber.....	35,850	38,642	2,792	
Woodwork.....	450	1,690	1,240	
Kerosene	15,900	32,900	17,000	
Total	467,634	596,179	128,545	

EXPORTS TO THE UNITED STATES.

As will be seen from the following table, there is also in exports to the United States a slight increase over those of last year:

Article.	1902.	1903.	Increase.	Decrease.*
Bananas	\$69,618	\$75,432	\$5,814	
Balsam		100	100	
Cocoanuts	40,936	54,962	14,026	
Cocoa.....	2,726	1,694		\$1,032
Coffee	4,815	5,920	1,105	
Hides.....	8,903	6,460		2,443
Hats	757	200		557
Ivory nuts.....	6,518	9,400	2,882	
Manganese ore.....	12,038			12,038
Mahogany logs.....	183			183
Machinery	40			40
Old metal.....	360	140		220
Palm-nut oil.....	72			72
Rubber	4,595	6,490	1,895	
Turtle-shell.....	10,159	12,472	2,313	
Total	161,720	173,270	28,135	16,585

NAVIGATION.

Statement showing the vessel entries during the years 1902 and 1901.

Month.	Sailing vessels.				Steamers.			
	1902.		1901.		1902.		1901.	
	Num-ber.	Tons.	Num-ber.	Tons.	Num-ber.	Tons.	Num-ber.	Tons.
January	25	586	27	1,014	52	87,054	58	97,545
February	23	543	28	948	26	89,375	25	50,755
March	37	584	36	402	58	149,368	33	100,658
April.....	50	517	42	1,117	30	92,152	33	104,964
May.....	19	356	34	570	31	98,604	33	93,403
June	55	2,072	42	618	28	96,227	27	76,705
July.....	36	399	34	484	25	77,200	52	93,314
August.....	32	893	33	313	25	76,366	27	71,759
September	30	464	33	647	25	91,115	29	77,814
October	42	389	34	726	25	89,303	31	95,757
November.....	30	308	28	971	26	80,682	35	87,276
December.....	39	387	27	700	27	93,304	30	100,680
Total.....	418	7,498	398	8,510	378	1,120,750	413	1,050,630

Month.	Total.			
	1902.		1901.	
	Num-ber.	Tons.	Num-ber.	Tons.
January	77	87,640	88	98,559
February	49	89,918	53	51,703
March	95	149,952	69	101,060
April	80	92,669	75	106,081
May	50	98,960	67	93,973
June	83	98,299	69	77,323
July	61	77,599	86	95,798
August	57	77,259	60	72,072
September	55	91,579	62	78,461
October.....	67	89,692	65	96,483
November	56	80,990	63	88,247
December	66	93,691	57	101,380
Total	796	1,128,248	814	1,059,140

The transit business from this port is exclusively performed by the Panama Railroad, the only road connecting Colon with the Pacific coast. The business done by this road during the calendar year 1902 is shown in the following tables:

PANAMA RAILROAD STATISTICS.

Statement of the number of passengers carried and the passenger earnings.

Classification.	Passengers carried.		Passenger earnings.	
	1902.	1901.	1902.	1901.
	Number.	Number.		
First class.....	3,862	4,587	\$25,631.78	\$28,507.47
Second class.....	76,946	84,574	38,215.59	47,147.21
Total	80,808	89,161	63,847.37	75,654.68

Statement showing number of passengers transported during the years 1902 and 1901.

Month.	1902.					
	To Panama.			To Colon.		
	First class.	Second class.	Total.	First class.	Second class.	Total.
January	144	2,976	3,120	101	3,380	3,481
February.....	117	2,713	2,830	90	2,851	2,941
March.....	115	3,243	3,358	134	3,483	3,617
April	126	2,938	3,064	233	3,142	3,375
May	140	3,306	3,446	232	3,463	3,695
June.....	230	3,213	3,443	212	3,065	3,277
July	171	3,315	3,486	182	3,434	3,616
August	172	2,991	3,163	172	3,342	3,514
September.....	213	2,874	3,087	130	3,010	3,140
October	227	2,901	3,128	137	3,081	3,218
November	162	3,432	3,594	125	3,467	3,592
December	178	3,379	3,757	119	3,747	3,866
Total	1,995	37,481	39,476	1,867	39,465	41,332
Total for Panama and Colon.....	80,808					

Month.	1901.					
	To Panama.			To Colon.		
	First class.	Second class.	Total.	First class.	Second class.	Total.
January	232	3,867	4,099	172	3,633	3,805
February.....	194	3,535	3,729	169	3,510	3,679
March.....	175	3,836	4,011	180	3,922	4,102
April	223	4,514	4,736	227	4,175	4,402
May	203	4,313	4,516	275	3,852	4,127
June.....	229	3,963	4,192	287	4,387	4,674
July	228	3,710	3,938	204	3,605	3,809
August	155	3,089	3,244	155	3,075	3,230
September.....	203	2,943	3,146	167	2,845	3,012
October	212	2,731	2,943	111	2,771	2,882
November	215	2,976	3,191	109	2,948	3,057
December	154	3,090	3,244	109	3,284	3,393
Total	2,422	42,567	44,989	2,165	42,007	44,172
Total for Panama and Colon.....	89,161					

Destination and amount of freight moved.

Destination.	1902.	1901.	Increase.	Decrease.
	<i>Tons.*</i>	<i>Tons.*</i>	<i>Per cent.</i>	<i>Per cent.</i>
From New York to San Francisco.....	32,659	43,455	.....	24.84
From New York to Panama, South Pacific, Central America, and Mexico.....	30,434	28,455	6.95	.....
From Europe to Panama, South Pacific, Central America, Mexico, and San Francisco.....	54,319	61,972	.....	12.35
From Colon to Panama (local):				
Commercial freight.....	34,871	27,699	25.89	.....
Company's freight.....	27,984	34,162	.....	18.08
Total	180,267	195,743	.....	7.91
From San Francisco to New York.....	30,590	42,086	.....	27.31
From South Pacific, Central America, Mexico, and Panama to New York.....	52,107	59,651	.....	12.65
From South Pacific, Central America, Mexico, San Francisco, and Panama to Europe.....	72,436	79,388	.....	8.76
From Panama to Colon (local):				
Commercial freight.....	3,194	2,883	10.79	.....
Company's freight.....	8,095	5,833	38.78	.....
Total	166,422	189,841	.....	12.34
Total east and west bound.....	346,689	385,584	.....	10.09

* Tons of 2,000 pounds, or 40 cubic feet.

Destination and source of railway tonnage.

Destination.	1902.	1901.	Increase.	Decrease.
	<i>Tons.</i>	<i>Tons.</i>	<i>Per cent.</i>	<i>Per cent.</i>
<i>Colon to Panama.</i>				
For Panama.....	71,747	71,151	0.84	.....
For Central America.....	28,316	28,252	.23	.....
For South Pacific.....	41,943	48,085	.....	12.77
For San Francisco.....	34,519	45,434	.....	24.77
For Mexico.....	3,742	2,821	32.65	.....
Total	130,267	195,743	.....	7.91
<i>Panama to Colon.</i>				
From Panama... ..	29,896	25,814	15.81	.....
From Central America.....	41,431	40,128	3.25	.....
From South Pacific.....	62,373	80,318	.....	22.34
From San Francisco.....	31,107	42,552	.....	26.90
From Mexico.....	1,615	1,029	56.95	.....
Total	166,422	189,841	.....	12.34
Total east and west bound.....	346,689	385,584	.....	10.09

Comparative statement of tonnage movement in years ended December 31, 1902 and 1901.

Destination.	1902.	1901.	Decrease.
	<i>Tons.</i>	<i>Tons.</i>	<i>Per cent.</i>
Westbound	180,267	195,743	7.91
Eastbound	166,422	189,841	12.34
Total	346,689	385,584	10.09

366 COMMERCE AND INDUSTRIES OF COLON AND PANAMA.

Freight transported during the years 1898, 1899, 1900, 1901, and 1902.

Month.	1898.	1899.	1900.	1901.	1902.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
January.....	23,708	28,204	29,115	38,264	31,235
February	29,993	20,883	30,947	32,900	34,768
March	32,234	32,838	33,177	34,271	34,717
April.....	25,898	32,575	33,381	41,150	37,058
May.....	18,007	27,654	29,670	36,715	35,732
June	17,108	21,098	25,236	26,889	31,070
July.....	16,906	18,827	25,982	29,919	13,182
August.....	18,373	17,645	22,415	20,554	20,120
September	15,816	19,357	27,894	35,974	24,462
October	22,146	19,871	29,320	23,814	22,626
November.....	22,581	23,305	26,754	34,406	24,143
December.....	25,385	24,143	33,486	30,700	27,576
Total.....	268,156	287,400	357,377	385,584	346,689

Local and through freight transported from Colon to Panama during the years 1902 and 1901.

Month.	Local from Colon to Panama and way stations.		Through from Europe to all destinations.		Through from New York to all destinations.		Total.	
	1902.	1901.	1902.	1901.	1902.	1901.	1902.	1901.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
January	7,168	4,918	3,719	6,304	5,252	8,032	16,139	19,254
February	4,591	3,837	4,425	4,245	5,326	5,709	14,342	13,791
March.....	7,108	4,803	4,330	6,181	4,580	6,685	16,018	17,669
April.....	6,710	8,285	4,512	5,352	6,684	8,577	17,906	22,214
May.....	8,923	4,108	4,373	5,148	4,900	6,274	18,196	15,530
June.....	7,152	3,033	5,023	4,190	4,762	5,547	16,937	12,770
July.....	2,783	2,237	4,237	5,574	5,463	6,516	12,483	14,327
August.....	2,220	1,979	4,246	3,896	4,215	4,575	10,681	10,450
September.....	2,541	11,441	5,139	4,404	6,332	4,695	14,012	20,540
October	3,629	3,796	4,604	6,132	4,922	5,310	13,155	15,238
November.....	5,124	6,653	4,926	4,894	4,668	5,281	14,718	16,828
December.....	4,906	6,771	4,735	5,652	5,989	4,709	15,680	17,132
Total.....	62,855	61,861	54,319	61,972	63,093	71,910	180,267	195,743

Local and through freight transported from Panama to Colon during the years 1902 and 1901.

Month.	Local from Panama to way stations.		Through from all points to Europe.		Through from all points to New York.		Total.	
	1902.	1901.	1902.	1901.	1902.	1901.	1902.	1901.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
January.....	1,131	859	7,467	11,081	6,498	7,070	15,096	19,010
February.....	2,036	685	8,077	9,504	10,313	8,929	20,426	19,118
March.....	1,566	889	11,704	10,303	5,429	5,410	18,699	16,602
April.....	751	1,169	7,807	9,974	10,594	7,802	19,152	18,945
May.....	894	567	8,396	10,242	8,246	10,376	17,536	21,185
June.....	686	499	7,010	6,307	6,437	7,323	14,133	14,119
July.....	1,156	545	4,262	3,489	5,281	11,558	10,699	15,592
August.....	911	571	3,443	3,381	5,085	6,152	9,439	10,104
September.....	351	601	3,588	2,652	6,511	12,191	10,450	15,444
October.....	663	733	2,714	4,322	6,094	3,521	9,471	8,576
November.....	460	667	3,352	3,733	5,613	13,178	9,425	17,578
December.....	784	941	4,616	4,400	6,596	8,227	11,896	13,568
Total.....	11,289	8,716	72,436	79,388	82,697	101,757	166,422	189,841

RAILWAY AND STEAMSHIP EARNINGS.

The following statements show the earnings of the Panama Railroad and the Panama Railroad Steamship Line during the years 1902 and 1901:

Railroad statement.

Description.	1902.	1901.	Increase.	Decrease.
<i>Colon to Panama.</i>				
From freight.....	\$559,392.30	\$606,185.65	.....	\$46,793.35
From treasure.....	7,223.08	4,182.77	\$3,040.31	.....
From mails.....	49,402.46	52,254.08	.....	2,851.62
From baggage.....	8,816.26	9,695.40	.....	879.14
From passengers.....	31,735.21	39,236.18	.....	7,500.97
Total.....	656,569.31	711,554.08	3,040.31	58,025.08
<i>Panama to Colon.</i>				
From freight.....	522,667.88	590,624.07	.....	67,956.19
From treasure.....	16,035.16	14,334.07	1,701.09	.....
From mails.....	4,818.45	4,780.47	37.98	.....
From baggage.....	7,142.35	7,460.37	.....	318.02
From passengers.....	32,112.16	36,417.87	.....	4,305.71
Total.....	582,776.00	653,616.85	1,739.07	72,579.92
Total railroad earnings.....	1,239,345.31	1,365,170.93	4,779.38	125,825.62

Steamship statement.

Description.	1902.	1901.	Increase.	Decrease.
<i>Atlantic service.</i>				
From freight.....	\$652,966.87	\$718,607.88	.....	\$65,641.01
From treasure.....	5,556.51	4,951.65	\$604.86	.....
From mails.....	83,013.99	79,015.83	3,998.16	.....
From baggage.....	1,945.07	2,186.69	.....	241.62
From passengers.....	150,824.81	154,571.58	.....	3,746.77
Miscellaneous	4,008.88	7,517.21	.....	3,508.33
Total	898,316.13	966,850.84	4,603.02	73,137.73
<i>Pacific service.</i>				
From freight.....	161,051.32	349,277.33	.....	188,226.01
From passengers.....	6,029.00	16,425.25	.....	10,396.25
From baggage.....	37.91	120.18	.....	82.27
Total	167,118.23	365,822.76	.....	198,704.53
Total steamship earnings.....	1,065,434.36	1,332,673.60	4,603.02	267,239.24
Total railway and steamship earnings.....	2,304,779.67	2,697,844.53	9,382.40	393,064.86

OSCAR MALMROS, *Consul.*COLON, *September 1, 1903.*

TRADE AND COMMERCE OF PANAMA.

(From United States Vice-Consul-General Ehrman.)

Imports and exports.—Business has been anything but good during the last year. This is due to doubts raised in regard to the canal. England and France buy pearls to the amount of fully \$300,000 annually. The value of the imports of Panama are not much, if any, larger than its exports. They come from England, Germany, France, Italy, and the United States, and consist largely of wearing apparel of all kinds, canned goods, liquors, hardware, etc. The United States has less trade than it might have did its merchants and manufacturers cater to the wants of the people as to styles and quantities desired.

The exports to the United States in the fiscal year 1903 amounted to \$193,342, of which \$56,767 was hides; \$49,974 india rubber, \$27,805 cocobolo nuts, \$16,598 ivory nuts, \$13,372 deerskins, and \$6,908 coffee.

Manufactures.—The industrial efforts in manufacturing have not been very great. There are a few factories, but of no very great importance. Ice artificially manufactured here sells at 25 cents silver per kilogram (10 cents gold per 2.2 pounds). There are a number of small distilleries.

Transportation.—There are three steamship lines from Panama, viz, (1) the Pacific Mail, (2) the Pacific Steam Navigation Company, and (3) the South American Steamship Company. There is only

one railroad on the Isthmus, the Panama Railroad, which runs from Panama to Colon, 47 miles. Two passenger and two freight trains leave each terminal daily. The trip for passengers lasts three hours. The fares, with baggage, are, in gold: First class, \$10; second class, \$5; without baggage, \$4 and \$2, respectively. It takes seven days to get from Panama to the Atlantic ports of the United States—Baltimore, Boston, New York, Philadelphia—and twenty days to reach San Francisco.

Telegraph lines.—Panama is in telegraphic communication with all parts of the world, but because of delays it takes at least four hours to send a message, and to get a reply from the United States often takes a day.

Commercial travelers.—There is a municipal law that requires commercial travelers to procure a license before they begin business in the city. The charge for said license is \$25 Colombian silver.

Quarantine.—Up to last January there were no quarantine laws, but because of danger from the bubonic plague very strict regulations were enacted and are enforced.

Postal rates.—The postal charges are: Foreign, 20 cents Colombian silver per 15 grams; domestic, 10 cents per 15 grams. Packages from Colon to Panama pay 25 cents gold per package.

Mining.—The impression prevails that the land between Panama and Colon is rich in mineral deposits, and there is every reason to think that the popular belief is not without considerable foundation in fact. Reports have reached Panama of rich deposits in the Veragua region.

Exchange.—The rate of exchange for the year averaged about 150 per cent. It began at 140 per cent and has worked up to 160 per cent, the present rate.

Banking.—The banking business is conducted on pretty much the same principles as in other countries. The fluctuating rates of exchange make it difficult to buy drafts for remittances to foreign parts.

Credits.—United States houses still give only ninety-day credits, while European houses allow six months or even more, and usually charge 6 per cent interest, but often give the first six months' credit without interest.

Import duties.—Import duties average about 10 per cent gold. On liquors and beverages there are special taxes; these vary according to the kinds and qualities of the imports.

Monopolies.—Cigars, tobacco, cigarettes, salt, and ice are Government monopolies or are let out by the Government to private parties.

Packing.—In packing or putting up goods, Americans have much to learn, both as to amounts put in each package and as to durability of boxes, etc.

Marking goods.—There is no law like the English merchandise acts requiring the specific marking of packages; hence there is a great deal of imitation of trade-marks.

Trade hints.—If Americans will only pay a little attention to the needs and demands of the Panama people with whom they want to deal there is no reason why the United States should not supply by far the larger part of the country's imports. United States wearing apparel, particularly boots, shoes, hats, ties, etc.—in fact, all kinds—are wanted and will be worn by the people of Panama in preference to all others if terms of sale are satisfactory.

PANAMA, October 15, 1903.

FELIX EHRLMAN,
Vice-Consul-General.

NEW DANISH TRADING COMPANY.

(From United States Consul Frazier, Copenhagen, Denmark.)

Det vestindske Kompagni (the West Indian Company) is the name of a new shipping and trading company with headquarters at Copenhagen. The new company has had three ships built for the Baltic and Caribbean sea trade. Copenhagen and St. Thomas will be the termini; the ships will call, however, at the principal Central American and Gulf ports. It is the purpose of the company to develop the trade at present existing between the two widely separated seas. Special attention will be given to the trade between the mother country and her possessions in the West Indies.

Each of the new steamers is a splendid, modern ship of 4,000 register tons. The length of each is 370 feet; width, 45 feet; and depth, 27 feet. Each has 3,000 horsepower and a speed of 12 knots per hour. Besides accommodations for 25 first-class passengers, each ship has a long bridge deck, extending from the foremast to aft, calculated either for steerage passengers or for merchandise.

There will be a monthly service to and from Copenhagen. The first ship leaves here in January next. Two of the ships were built in Flensborg and the third in Copenhagen by Burmeister & Wain.

It is significant that in a little over a year's time six new, modern steamships will have been added to the service between Danish and American ports, three of them of 10,000 tons each. (See CONSULAR REPORTS No. 275, p. 553).

The Copenhagen free port, with its splendid management, unquestionably operates to encourage the organization of new shipping and trading companies. The advantages which it offers should always be considered by those seeking to extend their trade in northern Europe.

RAYMOND R. FRAZIER, Consul.

COPENHAGEN, DENMARK, November 14, 1903.

GOLD DISCOVERY IN BRITISH COLUMBIA.

(From United States Consular Agent Ohren, Rossland, British Columbia.)

Another big strike of free-milling gold quartz has been made on Poplar Creek, which empties into the Lardeau River, the outlet of Trout Lake in the Trout Lake district of British Columbia.

There is quite a little romance connected with the discovery of this rich deposit. It seems a prospector had been grub-staked by some of his friends to go into the hills and prospect for them, but in the course of a game of cards lost his money and provisions. Nothing daunted, he set out on foot to go to the place he had originally intended. Arriving at Poplar Creek he became discouraged and determined to stake a claim on the near-by hills to say he had done something. To his own surprise he staked a valuable claim, as he found numerous small ledges carrying free gold in them. The prospector's surprise at these small discoveries was nothing to what it was when other prospectors passing that way broke a piece of rock off a ledge at the foot of the hill and found that the gold nearly held the particles together as in a chain. This last strike was made on what is now called the Lucky Jack. Since that date a tunnel has been driven on the Lucky Jack vein for about 100 feet, and the ore is immensely rich in the end of the tunnel. Some of the ore on the Lucky Jack is computed to run at thousands of dollars to the ton. The writer has seen samples as large as a cocoanut broken up, but held together by the network of gold throughout the sample.

A town has sprung up, and there are now seven hotels and many other places of business. Lots which sold originally for \$100 are now held at \$800, \$900, and even \$1,100; others, of course, away from the centers, are not held as high.

There will be a good opportunity for our machinery men to get in here. The British Columbia Consolidated and the Great Northern mines have both applied for water rights on Poplar Creek and mills are to be erected at an early date. Vanners, concentrating tables, piping, belts, pulleys, dynamos, wiring, cables, tramways, compressors, boilers, drills, ore cars, picks, shovels, sawmill machinery, hotel supplies, canned goods, smoked and preserved provisions, lard, bacon, hams, groceries, and dry goods are going to be required there in the spring, and I think it would be a good thing for our dealers and merchants to send their nearest agents or representatives into that camp to look after their interests, as there will be a rush in there in the spring—at least that is the understanding here

at this moment. I will gladly answer any inquiries concerning this place.

I would not recommend anyone to purchase stock in mines in this Province unless they know the persons managing the property or have had a complete investigation made by some person in whom they have absolute confidence. There is, no doubt, a large amount of stock being hawked about in the Eastern States which represents little or no value, and I do not wish to be responsible for persons investing in stock in mining companies here which may in the end prove absolute failures.

GEO. A. OHREN,
Consular Agent.

ROSSLAND, BRITISH COLUMBIA, *November 5, 1903.*

JAPANESE COMMERCE IN MANCHURIA AND NORTHERN CHINA.

(From United States Commercial Agent Greener, Vladivostock, Siberia.)

A Japanese newspaper, Osaka Mainichi, edited in one of the most industrial districts of Japan, publishes the following statistical information on the commerce of Japan in Manchuria and northern China:

The imports and exports of the Japanese in the ports of Niuchwang, Tientsin, and Chefoo, not including Port Arthur, Dalny, and Tsiaodshow, amount to \$15,000,000. Including the latter three places the Japanese commerce exceeds that of any other country. The following figures of imports and exports into Tientsin and Chefoo in 1901 indicate the predominance of the Japanese: Japan, \$4,600,392; Hongkong, \$3,446,252; all other countries, \$1,635,738.

The same may be said of Japanese imports into Niuchwang, with the exception of the imports of cotton goods, in which business the Americans are at the head. Imports from the United States, \$2,946,500; from East Indies, \$2,357,200; from Japan, \$942,880.

On the other hand, Japan is leading in the business of exporting beans and bean cakes from Niuchwang, which average from \$3,535,800 to \$4,714,400 per annum.

Upon the whole, the commerce of Japan in Niuchwang is more than \$11,786,000 per annum.

The shipping business is also in full swing with the commercial activity and the enterprise of the Japanese. In 1901 Niuchwang was visited by 261 Japanese steamers, with cargoes of 202,230 tons; 192 English steamers, with cargoes of 196,282 tons; and steamers of other nationalities, with cargoes of 71,741 tons.

The foregoing shows how great are the interests of Japan in Manchuria. The latter country is of more consequence to Japan than Korea, and in the future Manchuria, with her large natural wealth and with the larger productiveness of her population in comparison to Korea, will become an active purveyor of agricultural and mineral products for Japan and will supply many of the raw materials for her manufacturing establishments.

Even now Japan has very large sums invested in improvements in the port of Tsin-van-dao, with the intention of making this port the basis of her commercial dealings with northern China and Manchuria.

R. T. GREENER,
Commercial Agent.

VLADIVOSTOCK, SIBERIA, *August 13, 1903.*

WAGES AND COST OF LIVING IN GERMANY.

(*From United States Consul Muench, Plauen, Germany.*)

There is no decrease in the high cost of living referred to in the last annual report from this district.

Meat, now an article of luxury to the German working people, commanded the following wholesale prices per pound in 1902 at the public abattoir in Plauen—sold in quantities of not less than 110 pounds:

Description.	First quality.	Second quality.	Third quality.	Fourth quality.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Steers.....	15.32	14.68	13.92	.....
Bullocks	14.67	14.04	13.33	.....
Cows and helpers.....	14.61	14.04	13.33	12.59
Veal, live.....	10.73	10.13	9.68	.....
Mutton, live.....	7.66	7.28	6.94	.....
Pork	15.73	15.25	14.63	.....

While a very thorough system of meat inspection at the public slaughterhouses, or abattoirs, assures the consumers of the complete healthfulness of the meat, it adds to the cost, which to the consumer in the city of Plauen is from 25 to 40 cents at retail. The consumption of meat in this comparatively wealthy district amounted in 1902 to 68.54 pounds per capita.

The tariff and restrictions imposed by Germany upon the importation of breadstuffs has served to keep the price of wheat flour at about double that paid for the same quality in the United States. Rye flour, the great staple of the poorer classes, is proportionately cheaper, and vegetables, especially potatoes, when reasonably abundant, are so cheap that a large proportion of the latter is converted into dextrin and distilled spirits for use in the arts.

While wages in certain classes of skilled labor have advanced during the past year, yet, as a whole, such increase is not in proportion to the growing cost of living.

HUGO MUENCH, *Consul.*

PLAUEN, GERMANY, *October 12, 1903.*

REGULATING TRUSTS IN GERMANY.

(From United States Consul Muench, Plauen, Germany.)

A pregnant question confronting the German people is that concerning the regulation of pools and trusts. The official commission appointed some time since for the purpose of gathering evidence and recommending measures looking to such control has been in session for a long time and may at no distant date report results and plans. The syndicates and trade combinations already formed in the German Empire are almost innumerable. Those of leading importance are the coal cartel, iron cartel, and sugar cartel. The coal trust has just been more compactly organized, and its operations are not seriously complained of, except by the "middlemen," who are being rapidly eliminated. Of iron trusts there are several, most of which have had a stormy time in holding their members, whose prosperity is seriously threatened, not only through their inability to further compete in the markets of the United States, but by the likelihood of a serious counter competition from that quarter. The original sugar trust naturally went out of existence with the taking effect of the Brussels sugar convention on September 1, 1903, and retail prices for the commodity have sunk to something like a reasonable figure. Strenuous efforts are now being made by sugar mills and refineries to arrive at some new plan of friendly cooperation by which the diminished favors still accorded to the industry under the German law may be ratably divided between the two interests, thus far apparently without success.

HUGO MUENCH, *Consul.*

PLAUEN, GERMANY, *October 12, 1903.*

ANNUAL REPORTS OF GERMAN CHAMBERS OF COMMERCE.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

The following extracts taken from the annual reports of German chambers of commerce, lately published, should be interesting and instructive to our manufacturers and exporters:

FROM THE REPORT OF THE CHAMBER OF COMMERCE OF AIX LA CHAPELLE.

Fruit and cattle inhibition.—This chamber, with numerous other commercial bodies, has supported the memorial and resolutions of the Association of German Producers and Dealers in Necessaries of Life, protesting against the police orders inhibiting the sale of dried fruit which contains an admixture of sulphuric acid.

Acting upon a request coming from the Pork Butchers' Guild of Aix la Chapelle, this chamber has addressed a memorial to the Royal Prussian Minister of State complaining of the hardships caused to the population by the inhibitory orders against the entry of foreign cattle. The scarcity of pork has reached the point of being a calamity. The demand for pork coming from our large working population can not be satisfied, as the price of the meat has enormously increased and is higher than in any other town in Prussia, our butchers being altogether dependent upon native stock for their supply.

Machine needles.—The business condition of our needle manufacture has been difficult during 1902. The high cost of raw materials, the low prices ruling for the manufactured articles, the importation of large quantities of American sewing-machine needles, and the embargo against the entry of German sewing-machine needles into the markets of the United States—caused by the high tariff rates existing there—are the source of the conditions which prevent an improvement of our German needle manufacture. The hitherto very extensive exportation of pins to the United States has suffered a serious decline.

Chemicals, paints, etc.—The exportation of chemicals, paints, varnishes, etc., to the United States and Russia is becoming more and more difficult by their duties on imports. The domestic manufacture in those countries, which in the main is conducted by German foremen and chemical experts, is a competition almost impossible to overcome. If the new commercial treaties about to be negotiated by us should not bring any relief, then many of our manufacturing firms will be forced to establish branch factories in Russia and in the United States, as has already been the case in other branches of German industry.

Clocks.—Clock manufacturing has been very dull. The "black forest" (cuckoo) clock is getting crowded out by the alarm clocks of American style. The works of the latter class are perfect and the cases of most artistic finish.

FROM THE REPORT OF THE METZ CHAMBER OF COMMERCE.

Iron and steel industries.—The condition of the iron and steel industries has been as unfavorable as it was in 1902. The domestic demand did not absorb more than 50 per cent of the production, and it would have been impossible to get rid of the other half had not the United States come up as a customer. The prices obtained on the exports netted a severe loss, as the cost of production was high, owing to dear coal. The prospects for 1903 are even more dismal, as there are signs apparent that the United States has changed its rôle of a customer to that of a competitor, and it is only a question of time when that Republic will enter the world's market as a large seller of iron and steel products.

Shoe industry.—The condition of the shoe manufacture has not improved since last year. Overproduction and the numerous sales of bankruptcy stocks have sent prices downward to an unprofitable condition. We seriously trust that the demands for raising the duties on imported shoes will be duly regarded when new commercial treaties are to be concluded, for the foreign competition—especially American and French—is increasing day by day.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *November 2, 1903.*

SECOND CABLE BETWEEN GERMANY AND THE UNITED STATES.

(From United States Consul-General Guenther, Frankfort, Germany.)

The contract between the German Atlantic Telegraph Company and the German Post-Office Department with reference to the construction of a second German-Atlantic cable between Borkum and New York, via the Azores, provided that the first part of this second cable between Borkum and the Azores should be completed for business at the latest at the beginning of the year 1904, and that then the German Government would pay a fixed sum of 750,000 marks (\$178,500) for the year to the said company. The other agreements between the company and the German Empire become operative if the second part between the Azores and New York (the whole cable) is completed on January 1, 1905. A few days ago the first part of the cable—*i. e.*, between Borkum and the Azores—was successfully completed, in spite of the extraordinary unfavorable conditions of the weather on the Atlantic Ocean this year. The first part of the agreement with the German Post-Office Department has therefore been fulfilled according to programme.

Without considering the pecuniary advantage resulting to the German Atlantic Telegraph Company through this stipulated payment on the part of the Empire, on account of the existence of a double cable the cable traffic between Borkum and the Azores appears secure, as the probability that both cables should be interrupted simultaneously seems very remote, and as the new cable is in a condition to handle a considerable higher amount of traffic than the first one.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *November 5, 1903.* *Consul-General.*

COTTON GROWING IN THE GERMAN COLONIES.

Deutsche Kolonialzeitung, in its issue of October 22, 1903, says:

The Saxon and Vigogne Textile Association held a meeting at Chemnitz, October 14, to take measures to increase cotton culture in the German colonies. The secretary of the colonial committee, Herr Wilckens, spoke of the assistance which textile and colonial circles had rendered the efforts of the committee in introducing and extending a rational cultivation of cotton among the inhabitants of the German colonies. The efforts of the committee on behalf of the association were also recognized by the president, Herr Stark, who, among other things, said that considerable interest has been aroused in the 22,040 pounds of cotton lately received

from East and West Africa. Experts have declared that this may be favorably compared with the "good middling" and "fully good middling" of the United States. The president closed his remarks with the assurance that it would afford great satisfaction to the colonial committee if industrial circles would also actively recognize the importance of this work, as colonial circles had done.

The suggestion was made that this undertaking should be assisted financially.

Vorwaerts, the leading socialist organ, says, in regard to the above:

Although we oppose absolutely the system of colonial politics, we sympathize with this experiment in introducing cotton growing into Africa. The cotton trust in the United States, with its speculation and forcing upward of prices, tends more and more to the destruction of the cotton industry of England, Germany, and France. Not only has the August corner of cotton injured the German industry, but the cotton works of Lancashire are feeling the evil effects of the present speculation in New Orleans and New York. It would be a great advantage to the cotton trade if this monopoly could be broken.

It is possible that this region across the ocean will furnish a field in which all can work together harmoniously.

GERMAN EXPORTS TO THE TRANSVAAL.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

Germany exported to the Transvaal colony in 1902 goods to the value of 5,114,000 marks (\$1,218,132), against 893,000 marks (\$212,534) in 1901. Among the principal items exported were:

Article.	Value.	
	Marks.	
Machines and machinery.....	1,233,000	\$293,454
Locomotives and boilers.....	200,000	47,600
Explosives.....	254,000	60,452
Motor cars.....	72,000	17,136
Pianos	72,000	17,136
Bicycles and other fine iron articles.....	126,000	29,978
Ironware	473,000	112,574
Cotton textiles.....	184,000	43,792
Ready-made clothing and laundry wear.....	120,000	30,702
Cyanide of potassium.....	936,000	222,768

The Germans are very active in canvassing the South African markets, and have many great mercantile firms and importing agencies established there.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 22, 1903.*

RETURNING PROSPERITY IN GERMANY.

(From United States Consul-General Mason, Berlin, Germany.)

At length, after two years of anxious waiting and hoping, the crisis in German industrial values which began in the spring of 1901 is definitely past and a general recovery has not only begun but has progressed so far as to have all the outward indications of permanence. To what extent the values of the prosperous period which preceded the collapse have been regained will be illustrated by the following table, which shows the market values of certain standard German industrial stocks on the 17th of April, 1900, when the general prosperity was at its height; on the 26th of September, 1901, when the depth of depression had been reached; on the last day of 1902, when recovery had definitely begun; and on the 20th of the present month, when the effects of returning activity had become manifest in the values of industrial securities. The exhibit includes electrical manufacturers, iron and steel works, iron ore and coal mines, and the Great Berlin Street Railway Company.

Company.	Apr. 17, 1900.	Sept. 26, 1901.	Dec. 31, 1902.	Nov. 20, 1903.
General Electric Company.....	253.90	169.50	180.75	220.00
Siemens & Halske.....	176.00	145.00	120.10	140.00
Schuckert Electric Company.....	216.40	100.00	79.50	112.50
Electrical Enterprise Company.....	150.25	91.30	84.60	105.00
Electric Light and Power Company.....	114.25	96.75	93.75	109.75
Rhenish Steel Company.....	178.25	120.00	140.00	178.25
Bochum Steel Works.....	190.50	155.00	179.10	190.50
Eschweil Rolling Mill.....	258.75	67.90	112.50	118.00
Mannstadt Facon Eisen Company.....	372.50	108.75	138.75	143.50
Eschweil Furnace Company.....	288.50	170.00	214.10	258.00
Gelsenkirchen Furnace Company.....	226.70	153.00	179.90	213.70
Harpener Mining and Furnace Company.....	244.10	146.10	169.30	205.10
Concordia Mining Company.....	373.50	343.00	283.00	354.75
Hibernia Mining and Furnace Company.....	255.50	146.40	178.20	210.40
Hoerde Mining and Furnace Company.....	158.75	59.00	87.00	98.10
Cologne Mining Company.....	480.00	267.75	374.00	440.25
Laurahütte Iron Company.....	282.75	172.60	211.75	238.80
Ludwig Loewe Company.....	375.00	232.00	246.00	266.00
Phoenix Iron-Steel Company.....	224.00	105.50	123.90	154.25
Bombach Furnace Company.....	311.50	124.75	150.25	178.50
Schalk Mining Company.....	724.50	231.25	345.00	456.00
Great Berlin Street Railway Company.....	232.75	194.10	200.50	204.75

These twenty-two companies in various branches of production may be taken as representative of the electrical manufacture and the mining and metal industries of Germany. The foregoing comparison shows that while not one of them has recovered—in respect to the open-market value of its shares—the high-pitched prosperity of

the early months of 1900, all have recovered in an important degree from the depressed prices of September, 1901, and each one now rules from 10 to 50 points higher than it did at the close of 1902.

This recovery has largely taken place during the past two months, and may be ascribed to two or three primary causes. The first of these is the fact that the negotiations between Germany and the several European governments over the commercial treaties based on the new German tariff are understood to be progressing favorably. The Russian commission for this purpose is now in Berlin, and the negotiations are in active progress. Italy is understood to be ready to grant satisfactory terms of reciprocity. While little or nothing is actually known, the consensus of local-press opinion is that the treaties will be concluded and the classifications under the new schedule rearranged so that the tariff act of December, 1902, will go into effect somewhere between April 1 and July 1, 1904. This is only conjecture, and may be falsified by the event, but the facts that thus far no serious obstacle has been encountered in the treaty negotiations and that the newly elected Reichstag will be more liberally disposed toward foreign commerce than its predecessor have had a definite influence in restoring industrial values.

Another important element has been the fact that several of the leading electrical manufacturing companies—which have recently combined to avoid competition—have secured some important contracts for lighting and power plants, street-railway installations, etc., in foreign countries, notably Mexico and South America. At a recent meeting of representatives from all the electrical manufacturing companies, it was found that they were, almost without exception, running on full time and with orders booked that will keep them occupied for several months to come. Many of these orders have been taken at what would seem in America low prices, but the German electrical industry is enormously developed, is equipped with up-to-date machinery, has an abundant supply of cheap, docile, skilled labor, and can turn out electrical machinery, cables, and all that class of work at minimum cost.

Finally, there is behind the present recovery the natural fact that the crisis of panic, doubt, and suspicion has run its course; the rotten, dishonestly managed concerns have gone to the wall; the guilty directors are mostly in prison; the solid, honestly managed companies that weathered the storm have reenlisted public confidence; and the time has come for normal recovery. German exports in most lines are steadily increasing, and their far-reaching merchant marine, backed by the enterprise, the thorough, skillful methods of their merchants, salesmen, and capitalists in remote countries, combine to secure for German manufacturing exporters a constantly

widening market for their products. As a people they understand the ethics of foreign commerce; they educate their young men for it, and make a systematic study of the wants and tastes of alien peoples and the best methods of supplying them.

FRANK H. MASON,
BERLIN, GERMANY, *November 24, 1903.* *Consul-General.*

MEAT INSPECTION IN GERMANY.

(From United States Consul-General Guenther, Frankfort, Germany.)

The Frankfurter Zeitung publishes the following, dated Hamburg, October 8:

A local firm communicates the following significant facts with reference to the meat-inspection law:

The inspection office at Altona, on September 19, stopped a shipment of meat because it was said to be prepared with borax.

The importer, knowing the meat to be free from borax, protested, and a sample of the brine was sent by the police authorities of Altona to the official chemical laboratory at Kiel.

For his protection the importer took a sample also and sent it to the laboratory of the sworn commercial chemist, Dr. Enoch, at Hamburg. The information from the agrarian institute at Kiel states that borax was present in the brine, on the strength of which the meat was destroyed; the importer had to pay all costs. The sworn commercial chemist at Hamburg, however, declared after the analysis that no borax was contained in the brine.

On September 29 an importer had the same experience with the same official laboratory. The institute of the agrarians opposed to meat importation at Kiel declared that a sample of meat sent by the police authorities at Altona contained borax, while a sample of the same piece of meat was pronounced by the independent commercial chemist as perfectly free from borax. As the laboratory at Kiel is the last resort, no further steps can be taken against its decision.

The Frankfurter Zeitung comments as follows:

It is urgently necessary that the proper courts pay attention to the crying uncertainty created by the meat-inspection law, as the complaints with reference to its application are becoming louder and louder.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *October 9, 1903.* *Consul-General.*

SLAUGHTERHOUSE PRICES IN GERMANY.

(From United States Consul Monaghan, Chemnitz, Germany.)

Statistics on slaughterhouse prices, which were recently made public, show that there have been some changes in the meat supply of the Empire. The scarcity of hogs, which became very pronounced from 1900 to the end of 1902, is reported to have been

somewhat relieved. On the other hand the supply of the best quality of cattle, calves, and sheep has not been adequate to meet the demands of the market. The slaughterhouse statistics show that both the number and quality of cattle driven to the market leave much to be desired. As a result of this scarcity the prices for beef, veal, and mutton have been considerably advanced during the last year.

The following table is a comparison of the average wholesale prices paid for meats during the third quarter of 1901 and of 1903 at the slaughterhouse at Chemnitz. The prices are per 110 pounds of dressed beef and undressed veal and mutton:

Description	Price.	
	1901.	1903.
Steers:		
First quality (full fed, up to 6 years).....	\$15.19	\$16.49
Second quality (young, not full fed, or older, full fed).....	14.50	15.72
Third quality (medium-fed young, well-fed old).....	13.50	14.72
Fourth quality (poorly fed, any age).....	12.65	13.51
Heifers and cows:		
Heifers, first quality.....	15.10	16.47
Cows, first quality.....	14.76	16.00
Cows and heifers, second quality.....	13.83	15.12
Cows and calves—		
Third quality.....	12.27	13.84
Fourth quality.....	10.21	12.26
Bulls:		
Full-fed.....	13.87	15.66
Medium-fed.....	13.18	15.09
Poorly fed.....	12.25	14.22
Calves:		
Full-fed.....	9.52	10.97
Medium-fed.....	8.87	10.35
Poorly fed.....	8.06	9.36
Sheep:		
Lambs, young full-fed.....	7.56	8.70
Wether, older full-fed.....	6.92	8.16
Wether and sheep, medium-fed.....	6.22	7.35

The following statement shows the increases for every 110 pounds of dressed or undressed meat, as indicated above, in 1903 as compared with 1901, viz:

Steers, first quality.....	\$1. 30
Heifers.....	1. 37
Cows.....	1. 24
Bulls.....	1. 59
Calves	1. 45
Sheep	1. 14

The prices for beef and veal are at present continuing in their upward tendency, as is shown by the fact that for the first half of October the average prices were considerably higher than recorded above, viz:

Steers	\$17. 26
Heifers.....	17. 20
Cows.....	16. 72
Bulls.....	16. 01
Calves	12. 40

J. F. MONAGHAN, *Consul.*

CHEMNITZ, GERMANY, *October 29, 1903.*

NEED OF CHAMBERS OF COMMERCE ABROAD.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

The German Chamber of Commerce in Brussels, Belgium, in its annual report, lately published, has reproduced and indorsed a treatise on the above subject written by Dr. H. Roder, a German writer on economics. He says:

Germany, which stands next to Great Britain as the greatest exporting country in articles of manufacture, is not properly represented abroad, lacking for its commercial interests in foreign countries those institutions emanating from the home Government which furnish information to the German merchant at home, which show him new opportunities in foreign markets and connect him with other nations in amicable trade relations.

Though all political parties in Germany agree that chambers of commerce abroad are useful, yet the Reichstag (National Legislature) has not yet given practical aid to the project of establishing them.

Austria of all nations was first in recognizing the utility of chambers of commerce, and as early as 1870 established a chamber of commerce at Constantinople. The stimulus given thereby to Austrian exports in levantine countries has caused the Austrian Reichsrath (Legislature) to establish more of these institutions abroad.

Great Britain has 100 chambers of commerce in her colonies and 30 in foreign countries. France has 29, and purposes to create additional ones in South America and eastern Asia. Holland has 7, Spain 3, Italy and Belgium each 2, Russia has 1 in Paris and a commercial embassy in Morocco, and the United States has 4.

As early as 1886 the German Government was petitioned by 36 chambers of commerce and manufacturers' associations to establish such institutions abroad. Similar petitions have been introduced since, but were rejected by the Government, which pointed to the consular representatives and the few commercial attachés in service as sufficient for aid to Germany's export trade.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *November 16, 1903.*

GERMAN TRADE AND INDUSTRIAL STATISTICS.

(From United States Consul-General Guenther, Frankfort, Germany.)

COAL.

The production of coal in the German Empire for the month of September was 10,154,169 tons of anthracite (9,214,466 tons in September, 1902), 3,819,429 tons of brown coal (3,624,245 tons in 1902), 971,569 tons of coke (786,603 tons in 1902), and 913,464 tons of briquettes (826,982 tons in 1902).

The production for the nine months ended September 30, 1903, was 86,062,746 tons of anthracite (78,593,701 tons in 1902), 32,776,523 tons of brown coal (30,681,651 tons in 1902), 8,483,601 tons of coke (6,617,703 tons in 1902), and 7,570,127 tons of briquettes (6,617,703 tons in 1902). The imports of coal into Germany for September, 1903, amounted to 609,793 tons of anthracite (616,756 tons in September, 1902) and 666,362 tons of brown coal (693,202 tons in 1902).

The imports for the nine months ended September 30, 1903, were 4,972,095 tons of anthracite (4,686,033 tons in 1902) and 5,901,798 tons of brown coal (5,827,176 tons in 1902).

The German exports of coal for September, 1903, were 1,557,893 tons of anthracite (1,421,161 tons in 1902) and 201,617 tons of coke (202,821 tons in 1902), while for the nine months ended September 30, 1903, the exports were 12,757,841 tons of anthracite (11,379,064 tons in 1902) and 321,350 tons of coke (269,866 tons in 1902).

TOBACCO.

The latest quarterly volume of the statistics of the German Empire contains the final figures for the German tobacco crop of 1902.

The number of individual tobacco growers was 117,922, against 120,490 in 1901; the number of fields was 181,287, against 177,603 in 1901. This decrease, however, is on account of small growers planting not more than 1 are (0.02471 acre).

The number of growers of more than 1 are has been increasing since 1899; the increase in 1902 over 1901 was 1,518, so that the total area planted in tobacco has increased, being 17,340 hectares (42,847 acres), against 16,963 hectares (41,853 acres) in 1901 and 14,751 hectares (36,450 acres) in 1900. The yield of 1902, compared with the very favorable year 1901, shows a decrease, having been 37,638 metric tons, against 40,012 tons in 1901 and 34,709 tons in 1900.

The average yield per hectare (2.471 acres) was therefore 2.17 tons, against 2.36 tons in the two previous years.

The average price is stated at 825.8 marks (\$196.54) per ton, against 854.3 marks (\$203.32) per ton in 1901, so that the total value of the crop was 31,132,266 marks (\$7,409,479), against 34,180,324 marks (\$8,134,917) in 1901.

EARNINGS OF GERMAN RAILROADS.

The month of September, 1903, shows a considerable increase in the receipts of German railroads over September, 1902. The receipts for passenger traffic over the 46,430 kilometers (28,852 miles) were 50,057,733 marks (\$11,913,740), or 1,125,439 marks (\$267,855) more than in 1902; the freight receipts were 107,556,421 marks (\$25,598,428), or 7,301,197 marks (\$1,737,685) more than during September, 1902—total receipts, 157,614,154 marks (\$37,512,168), or 8,426,536 marks (\$2,002,516) more than in 1902. Computed per kilometer (0.621376 mile), the increase in the passenger traffic was 1.1 per cent; in the freight traffic, 5.92 per cent.

The total receipts of the railroads whose fiscal year commences April 1 for the first six months were 812,716,197 marks (\$193,426,455), an increase of 45,185,105 marks (\$10,754,055) over the corresponding previous period, viz, 272,379,187 marks (\$64,826,247) for passengers and 540,337,101 marks (\$128,600,230) for freight—an increase of 12,761,138 marks (\$3,037,131) on passengers and 32,423,967 marks (\$7,716,904) on freight. The railroads, whose fiscal year begins with the calendar year, had total receipts of 161,329,442 marks, or \$38,396,407 (an increase of 8,209,322 marks, or \$1,953,819), of which 59,871,600 marks, or \$14,249,441 (an increase of 2,805,430 marks, or \$667,692), were from the passenger and 101,457,842 marks, or \$24,146,966 (an increase of 5,403,892 marks, or \$1,286,126), from freight traffic.

IRON TRADE.

The imports and exports of iron and iron goods into and from Germany for the first eight months of 1901, 1902, and 1903 were as follows:

Year.	Imports.	Exports.
	<i>Met. tons.</i>	<i>Met. tons.</i>
1901	303,159	1,400,083
1902	185,409	2,080,521
1903	186,989	2,399,848

RICHARD GUENTHER,
Consul-General.

FRANKFORT, GERMANY, *October 24, 1903.*

INSURING MACHINERY IN GERMANY.

(From United States Consul Ozmun, Stuttgart, Germany.)

The Stuttgarter Mit- und Rückversicherungs-Aktiengesellschaft is an insurance company, founded at Stuttgart in July, 1891, with a capital of 5,000,000 marks (\$1,198,000), which, aside from life and fire insurance, in which it also engages, started, in the latter part of the year 1902, a novel method of insurance, whereby it undertakes, upon certain conditions, to insure machinery in general.

Although in business for only a short time, the company reports that this department is a great success and that already most of the large manufacturers are holding policies.

This insurance is taken upon accidents which may happen to any machinery through inability of the workmen or otherwise, or improper setting up of the machine, accidents by electric power, by storm, lightning, etc.

Excluded from this insurance are: Damages purposely done by policy holders; damages from defects in machinery known to exist before the policy was issued; damages from ordinary wear and tear; damages on changeable tools, forms, etc.; damages from fire, earthquake, cold, flood, revolution, strikes, war, and explosion; damages from night work and from internal causes of machinery, as latent defects in material.

Upon the last two exceptions, however, special policies are issued at special rates.

Upon this insurance the premium is payable in advance and the insured must allow inspection by the insurer at any time. All machines, it is expected, will have proper care. Notice must be given of any changes made in the machines, after which each party has the right to dissolve the contract of insurance within one week. In case of a sale of building and machinery the policy may be transferred to the purchaser.

It is incumbent upon the insured to show satisfactorily to the insurer that damage has actually been sustained to the machinery, due notice of which must be given without delay, and, if liable, the insurer must pay the insured within two weeks at the place where the property was insured. After the accident either party may cancel the policy within a month.

Damages are paid as follows, in case there is no special contract that full damages should be paid:

If the damage can be repaired, 80 per cent of such costs of repair; and in case of complete destruction, 80 per cent of the value.

A machine is supposed to be entirely destroyed if the costs of repair exceed the price of a new machine.

Where there are mortgages upon the machinery the insurer will not, without the consent of the mortgagee, pay until new machines are installed.

If any workmen have been injured in any accident from the machines the insurer will take all responsibility and bring all necessary actions at law.

In case of a disagreement the court having the proper jurisdiction shall decide.

If neither party gives notice two weeks before the policy expires the policy continues in force for another year.

The rates of insurance vary greatly and depend upon the amount of insurance and general conditions surrounding each case. In general, the rates are from 2 to 4 marks (48 to 95 cents) per 1,000 marks (\$238) of insured value, but in certain instances where the risks appear to be greater the rate may be 5 per cent or more. This insurance is for 80 per cent indemnification; for 100 per cent indemnification an additional premium of 25 per cent of these rates is required.

In all cases of mining machinery and in the manufacture of combustible and inflammable articles the insurer fixes the amount of the risk and the rate according to the special conditions revealed after a careful examination.

The lowest premium is 50 marks (\$11.90) and the cost of issuing the policy is 3 marks (71 cents). The policy must be for at least one year, but not more than five years.

EDWARD H. OZMUN, *Consul*.

STUTTGART, GERMANY, *October 31, 1903.*

EXPORTS OF GERMAN LOCOMOTIVES.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

The German press has recently referred with considerable gratification to the increased exports of German locomotives, but the annual report of the celebrated Saxon Machine Works at Chemnitz, which has just been published, throws some new light upon this subject. The report, which covers the business year 1902-3, says:

The value of our manufactures during the year was 9,285,167 marks (\$2,209,870), against 12,063,814 marks (\$2,871,188) for the year previous. Our working capital, including reserves, amounts to 7,293,678 marks (\$1,735,895). The unprofitable operations of the last year do not allow us to declare a dividend on the shares of our company. This unsatisfactory result was in the main caused by the unsuccessful working of our locomotive-building branch, which forms the backbone of

the company's industry. This branch, whose output in former years footed up to 6,200,000 marks (\$1,475,600), turned out only 2,636,000 marks' (\$627,368) worth in 1902-3. Home orders for locomotives declined on account of the existing depression and the consequent diminished railroad traffic. In order to keep up our locomotive branch and maintain our staff of employees therein we were compelled to seek for orders in distant markets new to us, and to obtain such orders were forced to accept prices which show losses instead of profits. Our machine-tool branch of manufacture has been most acutely hurt in 1902-3, during which year an immense mass of machine tools were disposed of at slaughter prices in order to get rid of accumulated stock. This slaughtering phase is still dominant; nor is there any prospect for speedy improvement, and the struggle for existence makes competition severe.

The average number of workmen employed during 1902-3 by the Saxon Machine Works was 3,197; the maximum, 3,561 men; wages paid during the year, 3,060,450 marks (\$728,387). Taking the maximum number of men employed, this would give an annual wage per man of \$204.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 19, 1903.*

ELECTROTECHNICAL INDUSTRY OF GERMANY.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

An essay on the electrotechnical industry of Germany, written by Dr. Brüner, the syndic of the Association for Fostering the Interests of German Electrotechnics, gives the following data:

Germany's output of the electrotechnical products during the year 1898 aggregated 228,670,000 marks (\$54,423,460) in value, of which 57,000,000 marks (\$13,566,000) was for foreign orders. The value of the exports of electrotechnical products rose to nearly 100,000,000 marks (\$23,800,000) in 1902, although the total production decreased considerably in that year.

The total amount of capital invested in German electrotechnical works and enterprises in 1900 amounted to 2,500,000,000 marks (\$595,000,000). The greater part of this colossal sum has since been wiped out by the terrible depreciation of the share capital. Many of the enterprises inaugurated and conducted for their own account by the electric manufacturing companies proved unprofitable and had to be given up, nearly all the capital invested becoming a dead loss. Among these ventures electric railroads in mountain districts and tramways and lighting plants in the smaller towns form a large proportion of the losses.

Dr. Brüner discusses at length the errors committed by the electrotechnical companies and urges them to center their energy upon obtaining orders abroad.

The Electrotechnical Journal says that the increase of electric roads in Germany during 1902 was about 300 kilometers (186 miles),

with an additional 400 kilometers (248 miles) in course of construction. The number of motor cars is estimated at 12,500, against 7,300 in 1901, and their power capacity at 30,000 kilowatts, against 25,530 kilowatts in 1901.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 9, 1903.*

MARKNEUKIRCHEN EXPORTS TO THE UNITED STATES.

(From United States Consul Muench, Plauen, Germany.)

In the consular agency of Markneukirchen, which is part of the consular district of Plauen, very many forms of industry are met with. The following table will show the general character of the goods exported to the United States during the year ended June 30, 1903, as compared with the preceding fiscal year:

Article.	Value.	
	1902.	1903.
Accordeons and concertinas.....	\$110,462.90	\$132,771.22
Bows	59,964.90	66,338.06
Brass instruments.....	27,286.82	27,856.69
Double basses.....	2,361.53	340.83
Embroidered cotton articles.....	2,227.77	3,425.26
Embroidered linen articles.....	1,812.69	2,954.59
Flutes.....	2,960.04	1,561.08
Harmonicas.....	196,125.74	199,471.24
Shell goods.....	17,337.70	26,947.80
Spinning gut.....	920.01	4,042.49
Surgical catgut.....	5,407.18	4,663.93
Strings.....	55,104.81	59,714.12
Violins	128,575.81	137,616.12
Wood wind instruments.....	5,460.03	7,724.67
Zithers.....	33.00	604.47
Miscellaneous.....	52,212.67	47,253.62
Total.....	668,253.60	723,286.19

It will be noticed that, aside from the small items of shell or pearl goods, embroideries, and guts, the entire export consists of musical instruments and strings therefor. A large number of small shops, as also many people in their homes along the western slope of the Erzgebirge, are devoted to the production of these goods. Excellent violins are being turned out, and their increasing export to the United States seems to indicate that they are appreciated there.

Raw material for strings is at present almost wholly derived from Russia. The wood used in the construction of instruments is mostly imported.

HUGO MUENCH, *Consul.*

PLAUEN, GERMANY, *October 12, 1903.*

TRAFFIC ON THE RHINE IN 1902.

(From United States Consul-General Guenther, Frankfort, Germany.)

The total traffic on the Rhine, at twenty Prussian harbors, in 1902 amounted to 17,418,105 tons, against 17,202,306 tons in 1901, an increase of 1.3 per cent, although the stage of the water was not favorable during the fall of 1902.

According to the statistics of the custom-house at Emmerich, 14,135,933 tons of freight passed the frontier in 1902, against 13,153,855 tons in 1901.

At the end of August, 1902, the Rhine fleet consisted of 9,574 vessels, with a total crew of 28,605. Of these vessels 1,183 are steamers, with an aggregate of 243,499 indicated horsepower, and 8,391 sailing and towing vessels, with an aggregate tonnage of 2,853,227. Of the 8,391 sailing and towing vessels 4,296 are of iron and 4,095 of wood. Of the 1,183 steamers 176 are wheel and 1,007 screw steamers. Of the steamer fleet 84 are for passengers only, 78 for passengers and freight, 172 for freight only, 781 for towing, and 68 for various purposes.

The passenger traffic on the Rhine in 1902 increased 7.5 per cent over the previous year.

RICHARD GUENTHER,

FRANKFORT, GERMANY, *October 1, 1903.*

Consul-General.

GERMAN VIEW OF THE AMERICAN IRON AND STEEL INDUSTRY.

The following is from a report of the German Imperial Office of the Interior:

A swamping of the German market by American cheap-priced products would suppose that the American metallurgical industry can produce cheaper than the German industry, which is, however, not at all true, so far at least as iron and steel making is concerned.

Judging merely from the prices of ore, coal or coke, lime, cost of transportation and labor, the cost price of a ton of Bessemer steel at Pittsburg, even to the United States Steel Corporation, does not fall below \$12.50 to \$13; the price is about \$15 for plants less favorably situated than the United States Steel Corporation with

regard to coke, ore, and transportation facilities. Even in Alabama the cost per ton of cast iron can not, under existing conditions, go below \$10 or \$11. The cost of partially and totally finished steel products is higher in proportion as the amount of labor embodied in the product increases. The larger the share of the total cost represented by labor the less chance the American metallurgical industry has of competing with foreign products.

Even assuming that the United States is going to enter into a period of business depression, that prices fall while the mills continue to run, and that, therefore, a part of the output will have to be disposed of abroad, the American producers even then will have to sell at cost. Below these prices they can not go, since even in their own market, with prices on the down grade, they would earn hardly sufficient to pay interest on their bonds, not to speak of dividends on their stock, for it is only owing to the extraordinary high-price level prevailing at present that the concerns, particularly the United States Steel Corporation, are able to pay interest and dividends, besides a surplus for improvements and repairs. With a decreased demand prices can not remain at their present height. When this result will be obtained the decreased business will reduce the output to such an extent that any further sacrifice of price in favor of exportation is not likely to be thought of.

Under present conditions, then, Germany may look forward to exports of American products merely at cost, and as long as this cost remains what it is at present American exports to Germany seem hardly possible.

In the case of pig iron, steel partially manufactured, and such manufactured products as rails, sheet iron, beams, etc., a reduction of price would be very difficult, since the share of the labor cost proper in the total cost is exceedingly small.

GERMAN TRADE RETURNS.

The Ironmonger, published at London, England, in its issue of October 10, states that the German statistical office has just issued a statement showing the trade between Germany and the United Kingdom during 1902. The value of the trade is given at \$379,587,000, showing the United Kingdom to be Germany's best customer.

During the period from 1897 to 1902, inclusive, the value of Germany's exports to and imports from the United Kingdom and her colonies and dependencies, and the percentage thereof in the total trade of Germany, were as follows:

Year.	Exports.		Imports.	
	Value.	Per cent.	Value.	Per cent.
1897.....	\$199,526,500	21.65	\$244,450,355	20.65
1898.....	238,458,500	23.50	290,203,508	21.93
1899.....	243,325,000	22.95	291,819,916	20.74
1900.....	257,924,500	22.61	304,971,388	20.54
1901.....	267,657,500	24.54	255,351,582	18.38
1902.....	282,257,000	24.34	257,336,120	18.22

Of the exports to the United Kingdom during 1902 the increase in the value of iron and iron goods was \$6,299,750, or 58.1 per cent of the entire increase of exports, exclusive of the precious metals. It is claimed that this large increase in the export of iron and iron goods, especially of partially manufactured products—which form the greater part of the increase—was due to the unsatisfactory condition of the German iron industry, which, with a view to the continual employment of the works, relieved the home market by selling large quantities abroad through the medium of low prices.

The Ironmonger quotes Mr. Bonar Law, M. P., parliamentary secretary of the Board of Trade, as stating that the Board of Trade returns show that the United Kingdom's annual production of steel is 4,900,000 tons, while the German production is 6,300,000 tons, and that year after year large quantities of raw iron are sent to Germany, which come back in the shape of finished steel goods; that the iron trade in Germany had progressed enormously until it reached its culminating point in 1900. In 1901 the break came and prices fell as a result of overproduction, and the large surplus sought a foreign market, the United Kingdom taking the greater portion. Commenting on the prospects of the future, Mr. Law said that while during the last few years the iron and steel trades had been unusually prosperous, and iron and steel works in Germany and the United States had been growing up like mushrooms, no mills had been built in Scotland during the past twelve years; that the home manufacturers feared a "dumping" from the United States, and not from Germany; but that during these twelve years, although the production in the United States had increased from 10,000,000 tons to nearly 20,000,000 tons, the home market had absorbed the increase.

BUILDINGS AND FIRE INSURANCE IN TURIN.

(From United States Consul Cunco, Turin, Italy.)

CHARACTER OF BUILDINGS.

Inasmuch as fires, so destructive of property and at times of human life, often occur in the United States and a large percentage of them are attributed to defective flues, I want to call attention to the business and residence property in Turin, a city of nearly 400,000 souls. I think that more than 95 per cent of all kinds of buildings in this city are constructed of bricks, and I do not know of a single structure built wholly of wood within its limits. Occasionally some stones are used, especially round ones, with the bricks. The bricks are burned exceedingly hard, so that in handling them they give a

metallic sound and can be thrown quite a distance in loading and unloading without breaking. Their color is mostly bright red, and such bricks are exclusively used in the inside as well as in the facing of walls, all partition walls being built thereof. In fact, I have not seen any soft bricks used for any purpose in this city. Such bricks are also used for sewer walls. In the erection of buildings the plain walls are "run up" without any facing or dressing whatever, and when the structures are under roofs—for which tiles are mostly used, slate being the exception—the work of facing or dressing the walls is begun at the top and finished by sections, working downward till the base is reached. The facing is of cement and after the desired artistic designs, wherein the skill of workmen often wins the admiration of observers. The interiors are finished in like manner, but with more special skill in frescoing the ceilings and halls. The ceilings are generally gracefully arched and present a handsome appearance. The side walls are papered. For flooring, tiles are mostly used on brick and cement foundations. The walls of such buildings are intended to endure for centuries, but when their exterior facing becomes uninviting the cement is chiseled off and a new coat applied, while the stone casings about the doors and balconies are chiseled, all of which gives them a new appearance.

FIRE INSURANCE.

From the character of the buildings, as above indicated, it is readily seen that fires can not well occur in Turin. A prominent citizen tells me that no fires worthy of mention have occurred in the city for over thirty-five years; and another business citizen, who has resided here for more than forty-five years, informs me that he can not remember a single fire of any importance during all that time. Such being the record, insurance rates are almost nothing. I have written the above for the purpose of calling attention to the mode and materials used in building in this city, because in the United States, by reason of frequent and disastrous fires, insurance rates are very oppressive to property holders. In the United States fires are often caused by defective chimneys, and this reminds me of the marked care with which fire flues here are built. With such a record, though there are no fire-escape devices here, people retire at hotels or elsewhere with a feeling of personal security that is quite comforting.

PIETRO CUNEO, *Consul.*

TURIN, ITALY, *October 6, 1903.*

INCREASED RAILWAY FREIGHT RATES IN MEXICO.

(From United States Consul LeRoy, Durango, Mexico.)

The rise in silver led the Government in July to grant to all the railways of Mexico permission to raise freight rates 15 per cent on September 1, 1903, in case exchange should then be below \$2.20 to \$1. The condition was not perhaps literally met, as exchange fluctuated around the figure given on September 1. It was, however, continuing its downward trend, and the increased rates were permitted to be promulgated and will remain in force until exchange shall again seem to be permanently above the figure quoted. The reason assigned for this concession on the part of the Government was that the railways, having had their rates fixed at a period when the exchange rate was higher, were the losers by the rise in silver, their fixed charges, interest, etc., being reckoned in United States gold. Certain food products of the country were exempted from this 15 per cent advance in freight rates, but it applies in general to all imports by rail from the United States.

JAMES A. LEROY, *Consul.*

DURANGO, MEXICO, *October 20, 1903.*

DURANGO'S IRON MOUNTAIN.

(From United States Consul LeRoy, Durango, Mexico.)

This solid mass of iron ore, close to the International Railroad depot at Durango, has figured in story and fable ever since the Spaniards and the Mexicans from the south first reclaimed this region from savages akin to the Apaches over three hundred years ago. Writing in 1803, Baron Humboldt, who did not quite reach Durango in his explorations but who had seen samples from this mass of iron, called it "that enormous mass of malleable iron and nickel, whose composition is identical with that of the aerolite which fell near Agran in Hungary in 1751. It is asserted that this mass at Durango weighs nearly 1,900 myriagrams, or four hundred times as much as the aerolite discovered by M. Rubin de Celis in Olumpa, Tucuman." Humboldt evidently thought this might be the world's greatest aerolite. Geologically, examination shows it to be a very remarkable "dike," emerging from a rocky plain at the elevation of 6,300 feet, rising from 400 to 650 feet in height itself and forming a tremendous lump of iron ore 1 mile long and one-third of a mile

wide. It has been calculated to contain 500,000,000 to 660,000,000 gross tons above the surface, with no notion of what may be below. The ore is a hard specular hematite, carrying on an average 60 per cent of metallic iron, much of it going higher and some even to 67 per cent. It is suitable for practically all processes of iron and steel making.

One might think that such a property as this, where "mining" consists simply in knocking down the sides of a mountain to obtain a rich iron ore, in a country whose industrial expansion is demanding larger and larger importations of iron and steel, would be better than the best proverbial bonanza of gold. The fact is, however, that the Mexican National Iron and Steel Company, an American concern, whose mining claims cover about one-half the mountain, has never until lately been a paying concern. This seems to have been due, first, to the fact that it was formerly operated with a view solely or primarily to sale of stocks, and, in the second place, to the difficulties in securing at a reasonable price fuel with which to operate it on a paying basis. Charcoal can be obtained near here, made from the timber on the Sierras to the westward, but its production has always been limited and relatively expensive. Coke was formerly brought from the United States and at such prices that the marketing of the company's iron products in Mexico, except at near-by points, was, when the high freight rates were added, very commonly at a loss, or no gain, in competition with American iron products. As stated, Mexican coke is now obtained and at considerably lower prices. Moreover, the concern is being managed primarily as a business enterprise. Facilities are being added for an increased output, and everything augurs great prosperity for this institution, which now turns out in its foundry and machine shops steam engines, hoisting machinery for mines, stoves, and simpler products, such as nails, as well as bar iron. The steel plant, which the company's name implies, may soon be added. Railroad extensions now promised to Durango will have a very direct influence in developing this business. The railroad to the Pacific coast would open up the great timber-clad regions of the Sierra Madre, disposing in large part of the fuel problem. A projected branch of the Mexican Central, bringing Durango much closer to Mexico City and, in particular, introducing an element of competition in freight hauling, would inevitably extend the market for the company's products much more rapidly than it could be met.

JAMES A. LEROY, *Consul.*

DURANGO, MEXICO, *October 20, 1903.*

DEVELOPMENT OF MEXICAN INDUSTRIES.*

(From United States Consul LeRoy, Durango, Mexico.)

Imports of iron and steel are the largest items of Mexican trade with the United States, and they increased most in the decade 1892-1902. Machinery alone jumped from \$1,500,000 in 1892 to over \$7,000,000 in 1903. Our sales in these lines, responding to Mexico's industrial development, will likely continue to increase, but it may be doubted if they will gain relatively as they have in the past ten years. It will not do to overlook the establishment of such concerns as the Mexican iron and steel plant near the "iron mountain" at Durango, the very large new steel plant at Monterey, and the smelters at Torreon and elsewhere. We can not expect to continue to take Mexico's raw materials, principally mineral products, behind a tariff barrier, and return them to her as finished products—at least in anything like the proportion that has of late ruled in this trade. It is inevitable that a country waking to life as this country is should both learn from us and turn our conditions to her own advantage. The establishment of industrial concerns such as cotton mills, shoe factories, etc., goes along with and stimulates an economic and social advancement and increases the call upon the United States for machinery; but the internal advancement in its turn leads the country, newly dependent on the outside world for more highly finished products, to seek to become again in a different degree independent and self-supporting. Grazing and the raising of corn and beans are diversified by the introduction of cotton and other plants, calling for better organized irrigation and agriculture; the precious metals cease to monopolize the miner's attention, and the country's natural resources in iron and coal can no longer be left buried. As the railroads open up the country more and more, smelters increase both in size and number, a movement stimulated of late by the disposition of "the Guggenheims" to build up big concerns down here, to render their operations independent of their big smelters in Colorado, because of the labor troubles there. It need hardly be pointed out that it is, in general, precisely this sort of development of Mexico that we should desire. It means inevitably the making of the country a better neighbor and a better market for our manufactured products; but at the same time the careful observer will see that there is bound to come about a considerable readjustment of our trade with Mexico—something that can perhaps be but hinted at now, as it is only in its beginning.

* The United States exports to Mexico during the following years were: In 1892, \$14,293,009; 1896, \$19,450,256; 1900, \$34,974,961; and 1902, \$39,873,606.

We have had the advantage thus far in dealing with Mexico of finding her a country in which only nature's raw resources were exploited, and of helping to exploit those resources and selling her the wherewithal to do it according to modern methods, both at the same time. This era is by no means over. Nevertheless, we may already hint at a time when Mexico will face us and our trade as other more highly organized countries do, and when there will be need for a readjustment of the naturally reciprocal basis on which we now deal with each other.

JAMES A. LEROY, *Consul.*

DURANGO, MEXICO, *October 20, 1903.*

MARKETING IN MONROVIA.

(*From United States Consul-General Lyon, Monrovia, Liberia.*)

I submit the following facts relating to the condition of food supplies during the rainy season in Liberia, and the current prices for staple articles of use.

Monrovia, the capital of the Republic, has no regular market building. Saturday is the principal market day. The natives who furnish the supply line up early in the morning along the edge of the river banks, and purchasers must take their chance in the scramble. The supply is always less than the demand. By 8 a. m. the selling ceases.

Once, perhaps, in every two weeks an ox is butchered. To secure any portion of this, it must be previously engaged. Many times before you can learn that meat is to be on hand every pound has been previously engaged. To secure yourself you must have a friend to look out for you and to inform you of the fact. For this service you have to "dash" him, as it is called in African parlance.

This scarcity of meats and vegetables in the rainy season compels foreigners to get their supply abroad or purchase from local merchants at the following rates:

Article.	Price.	Article.	Price.
Flour.....per barrel...	\$13.00	Beef .....per pound...	\$0.20
Ham.....per pound...	.50	Eggs.....per dozen...	.36
Bacon.....per cwt...	25.00	Kerosene oil.....per gallon...	.48
Sugar.....per pound...	.12	Corn beef.....per 1-pound can...	.24
Butter .....do...	.75	Milk.....per can...	.20
Cabbage.....do.....	.10	Good cheese.....per pound...	.50
Lard.....do.....	.50	Mixed biscuits.....do.....	\$0.24 to .30
Pork.....do.....	.20		

ERNEST LYON, *Consul-General.*

MONROVIA, LIBERIA, *October 5, 1903.*

BANK FOR WORKINGMEN IN NORWAY.

(From United States Consul Bardel, Bamberg, Germany.)

A State institution for loaning money, called the Norwegian Workingmen's Bank, for securing land and homes was opened in Norway October 1, 1903:

The bank was erected in accordance with a law passed June 9, 1903, and its purpose is to better the economical position of workingmen by granting them loans on easy terms.

The law provides, first, loans for the purchase of workingmen's homesteads—that is, small parcels of land of at least $1\frac{1}{4}$ acres and not more than 5 acres, which land must either be cultivated or fit to be cultivated and must not exceed the tax value of \$804 for land and home or \$536 for the land alone.

Secondly, the law provides for the erection, completion, or purchase of houses on loans; these houses to be used by not more than two families, with ground not larger than $1\frac{1}{4}$ acres and a taxed value of \$1,340 in cities and \$804 in the country. Such loans can be obtained by needy Norwegian subjects, male or female, or by communities in the country for the purchase and cultivation of land which can be divided up for workingmen's homesteads. Loans can also be had by country and city communities; also by building associations which have charters to erect workingmen's dwelling houses. Needy persons shall be such as require a considerable advance in order to buy a homestead or house.

Each community is to appoint a working committee, and when a loan is asked for the purchase of land they have to certify that in their judgment the applicant knows enough about agriculture to be able to cultivate the land. The law concedes to these committees a wide scope. They are to give advice to citizens who are applying for loans, to inspect and make estimates on homesteads, to approve the plans for building, and finally to act as agents between the bank and the parties applying for loans.

The respective committees are to be responsible for all loans to private persons, as well as to building associations. The loans must not exceed nine-tenths of the taxed value of the property. Loans for land cost $3\frac{1}{2}$ per cent interest and for houses 4 per cent. The refunding has to be accomplished in the former instance in forty-two years, counting from the date of record, and to commence six years after that date; in the latter instance in twenty-eight years, to begin three years after receipt of the loan. The borrower is entitled to reduce his

debt in less time, but where he lapses in his payments the rest of the loan still due matures and may be collected by force. All losses, including losses of exchange suffered by the bank, are paid by the State.

W. BARDEL, *Consul*.

BAMBERG, GERMANY, *October 24, 1903.*

PERUVIAN-ASIATIC TRADE.

Under date of October 26, 1903, United States Minister I. B. Dudley, of Lima, Peru, transmits the following translation of an article from *El Comercia*, Lima, relative to the establishment of a steamship line for the development of the trade of Peru with China and Japan:

For some years past the necessity has been felt of favoring the development of our increasing trade with China and Japan by means of a line of steamers, instead of the sailing vessels which form the only means of direct communication with those countries, and in order to satisfy this necessity as well as to facilitate at the same time the interchange of products by affording an outlet for our cotton and sugar in the markets of eastern Asia, the Western Steamship Company (*Compania Maritima Occidental a Vapor*) has been formed.

As our readers are well aware, during the last few years, especially in the United Kingdom, there has been a considerable extension in the building of cargo steamers, with the object of hiring them to private companies all ready and fitted out for trade—that is to say, with their crews complete, from captain down, and all expenses for crew maintenance and repairs of the steamers to be for account of the owners, while the only expenses for account of the charterers or contractors are those for coal, port dues, etc.

As the company has decided to commence its operations with hired steamers, the capital of the concern has been put down at only £25,000 (\$121,662), of which £20,000 (\$97,330) are already subscribed, principally by Chinese merchants, as among the shareholders there are only five that are not of that nationality.

It is easy to understand that the above sum is sufficient for the requirements of the company, so as to charter two steamers, each of which can carry 3,000 tons of cargo, and to meet all other necessary expenses for the due organization of the concern.

The itinerary of the voyages will be from Callao to Panama and from the latter port to Yokohama and Hongkong, touching at the same ports on the return voyages.

The passenger traffic yearly between Peru and China is, on the average, about 300 persons, and the cargo brought exclusively from China to Peru amounts yearly to about 7,000 tons. To this must be added the passenger and goods traffic with Japan, and finally all the trade between Panama and Asia, which will undoubtedly assume an important figure, owing to the fact that the steamers of the Western Company will be the only ones that make the voyage direct from Panama to Japan and China.

Nowadays all travelers from North, Central, and South America who arrive at Colon or Panama on the way to Asia are compelled unavoidably to go on to San Francisco or Vancouver, as at the present time it is only at those ports that steamers leave for the western coast of Asia.

The starters of this company expect to make the first voyage next April.

One may add to the foregoing remarks that according to reliable information the imports of raw sugar into Hongkong, which, as everyone knows, is a free port, exceeded last year 240,000 tons, principally from Java, as the imports from the Philippine Islands were only about 20 per cent of the total amount.

The principal purchaser is the China Sugar Refining Company, belonging to the well-known firm of Messrs. Jardine, Matheson & Co. This refinery has had an opportunity of trying the Peruvian sugars and has expressed a desire to purchase them.

In Japan, where the consumption of sugar is much larger than in China, the same thing occurs. The refineries obtain their supplies of the raw article from Java and would be glad to purchase our sugars if it were possible to get them at more or less the same price, which may very well happen if the new steamship company maintains its avowed intention of charging the lowest possible rates of freights.

The consumption of cotton in Japan, where the manufacture of cotton goods has acquired of late considerable importance, is enormous, and taking into consideration the excellent quality and the many different classes of Peruvian cotton there should be undoubtedly a large sale of this article in that country.

COMMERCIAL MUSEUM IN THE PHILIPPINES.

The following letter seeking the cooperation of the Department of Commerce and Labor was received recently and is published herewith for the information of our manufacturers and exporters. The museum aims to encourage the intelligent and profitable development of the resources of the Philippine Archipelago and to aid in the extension of its domestic and foreign trade relations.

Mr. Shiley to the Secretary of Commerce and Labor.

MANILA, P. I., August 10, 1903.

SIR: Some time since the commercial museum invited exhibits from the manufacturers of the United States, Europe, and Japan. The matter was taken up in Japan not only by individual manufacturers, but by the Imperial Government. There is now on the way from Japan to the museum a governmental exhibit, accompanied by a number of individual exhibits, aggregating in original value over 5,600 yen (\$2,787).

I am aware that the trade of the Philippine Islands cuts a very small figure with the exporters of the United States at the present time. I am convinced that the trade of the Philippines will prove an effective harbinger to a much larger trade in the Orient in the near future.

Great Britain has a firm grip on the commerce of the Orient, but Germany has been making substantial gains in the recent past; in not a few lines Japan intends to have something to say about the commerce of this part of the world. The French in Cochin China hold no mean position, and they are taking advantage of every available means to secure their full share of the growing trade of the East. Russia's position in Manchuria places her where she can successfully outbid all comers in several lines of commodities of which the Orient is a large purchaser.

Notwithstanding the seeming advantages of these countries, the United States, in possession of the Philippines, with the excellent harbor facilities soon to be completed, will occupy a strategic position, and may command her full share of the

trade, if only the manufacturers of the States will make a legitimate and determined bid for it.

The United States is on the best of terms with China and Japan. She is nearer this great market than either England, Germany, or France. Manila is an excellent point of departure for the collection and distribution of merchandise.

This museum is concerned with the development of the commerce and industries of the Philippine Islands. It will be perfectly impartial in dealing with its patrons. Nevertheless, it seems only reasonable that the United States should have a very important part in the development of these islands and of the Orient.

In this laudable work I desire to enlist your cooperation in securing governmental and individual exhibits for the museum. These exhibits should consist of articles which are useful in the various forms of agriculture as practiced here, in lumbering, mining, and road making; builders' hardware, mechanics' tools, shelf hardware, blacksmithing tools, cutlery, and gasoline and oil stoves; machinery for manufacturing and refining sugar; rice, cocoanut oil, cocoa, chocolate, and tobacco; dry goods, notions, ladies' and gents' furnishing goods, and rubber goods; groceries, provisions, and canned and dried goods; electrical appliances and supplies; engineers' and plumbers' stores and tools; ship chandlers' stores; safes, scales, and balances; optical goods; glass and silver ware; jewelry, watches, and clocks; perfumery; paints and oils; stationery; hand cameras and photo supplies; sporting goods; harness and saddlery; office and household furniture; bicycles and carriages.

Such an exhibit placed at the present time before the importers and dealers of the Philippines would, I believe, be an excellent investment for the manufacturers of the United States, for it is noticeable here that our people are looking more and more to the United States as a purchasing market. With proper encouragement this market will continue for years to increase in extent and importance.

Will you be kind enough to inform me what you will be able to do for the museum in this matter?

Very respectfully,

SAMUEL B. SHILEY,
In Charge of the Commercial Museum.

SCOPE OF THE MUSEUM.

The museum is divided into various sections which deal (1) with native products, (2) imports, (3) Philippine exhibits in foreign countries, and (4) a department which gives information concerning (a) the Philippines, (b) foreign countries, (c) sources of information, and (d) patrons.

Foreign manufacturers and exporters and local producers, manufacturers, exporters, and importers may place exhibits in the museum free of charge. However, in some instances where the exhibits require special care and protection it may be desirable that the exhibitor furnish a suitable case therefor.

In case of heavy articles or intricate machinery the exhibitor will be required to place them in the museum. Articles for exhibition sent by rail or water transportation to Manila will be looked after by the museum. However, all freight to Manila must be prepaid, unless otherwise arranged for with the museum. There are no customs dues on articles addressed to the commercial museum.

Every article on exhibition will be marked with its name, name of manufacturer and exhibitor, use, price, etc.

In case of valuable or perishable articles the exhibitor may retain the right of property in the articles exhibited, and may change or discontinue his exhibit whenever he feels so disposed, except that he may not demand an article while it is on any special exhibit or when it is wanted for such an exhibit.

The commercial museum is maintained by the civil government and its services are rendered without charge to its patrons.

All communications and articles for exhibition should be addressed to Samuel B. Shiley, Commercial Museum, Manila, P. I.

TOURISTS IN SWITZERLAND.

(From United States Consul Washington, Geneva, Switzerland.)

I transmit herewith statistics just published showing the number of strangers registered at hotels and boarding houses in Geneva from May 15 to October 15, 1903, and for the same months in the four preceding years.

It is of interest to observe that travelers from the United States have steadily increased in number yearly, there having been 11,859 registered here during the five months indicated this year as against 7,348 in 1899.

The following statement shows the number and nationalities of strangers registered at hotels and boarding houses in Geneva, Switzerland, from May 15 to October 15, 1903:

From—	1899.	1900.	1901.	1902.	1903.
Switzerland.....	17,484	18,303	23,107	31,058	29,518
Germany.....	13,176	12,893	16,001	18,774	22,213
Great Britain.....	7,377	5,073	7,819	8,577	11,186
Austria-Hungary	2,071	3,137	2,697	3,070	3,042
Africa and Asia.....	342	381	521	1,091	940
Australia.....	89	89	82	62	117
Belgium.....	1,070	803	1,311	1,437	1,440
Denmark, Sweden, and Norway.....	464	469	453	531	563
Spain and Portugal.....	883	2,217	1,196	2,020	1,763
United States.....	7,348	9,143	9,354	9,879	11,859
France.....	40,752	35,743	49,543	54,347	56,263
Netherlands.....	1,007	944	1,196	1,623	1,339
Italy	4,577	6,328	8,882	6,594	7,156
Russia.....	2,530	4,897	3,323	3,339	3,676
Turkey, Greece, and Balkan States.....	710	1,329	886	749	948
Other countries.....	234	527	201	271	430
Total.....	100,114	102,276	126,572	143,492	152,553

HORACE LEE WASHINGTON,

GENEVA, SWITZERLAND, *November 3, 1903.*

Consul.

No 281—04—11

SWISS ANILINE INDUSTRY.

(From United States Consul Gifford, Basel, Switzerland.)

One of the principal industries of Basel, the manufacture of dye-stuffs—chiefly from coal-tar products—and chemicals, is suffering rather from the steady decline in prices than from the lack of a market. The demand for the wonderful aniline colors steadily increases in all parts of the world, especially in the United States, where one-fourth of the whole product finds consumption—a much larger proportion than is taken by any other country. That Switzerland and Germany monopolize, to a large extent, this important branch of industry, in which the United States has remained so far behind, is by reason of the training that is given to a multitude of young chemists in the excellent technical schools of those two countries. This remark can not be too often repeated; for the unique case where the schoolmaster has been the direct creator of many millions of wealth is surely worthy of imitation by a practical people like ours.

New discoveries are constantly being made by the employees of the Basel factories. The extent of the field in which they labor may be judged from the fact that there now exist no less than 25,000 patents for the single series of so-called azo colors, which theoretically are capable of becoming 3,159,000. The patents mentioned are all granted by foreign governments, since the Swiss lawgivers have up to this time refused to patent anything but what can be represented materially—things, not processes.

GEO. GIFFORD, *Consul.*

BASEL, SWITZERLAND, *October 15, 1903.*

FAILURE OF THE FRENCH FRUIT CROP.

(From United States Consul Ridgely, Nantes, France.)

In a special report dated April 24, 1903,* I advised the Department of the almost complete destruction of the fruit crop in western France. The result of this fruit failure was, as predicted, an immediate and largely increased demand for American dried fruits and prunes. The action of the Bureau of Foreign Commerce of the Department of State in promptly publishing the above and other similar reports enabled various American fruit exporters to communicate promptly

* Published in ADVANCE SHEETS No. 1645 (May 13, 1903).

with this consulate and to establish immediate relations with brokers and importers. More American dried fruit has been marketed at Nantes this summer than in any previous year. It is likely that 20,000 barrels of American sliced apples alone will have been sold here before the season is finished. The bulk of this product is used for making cider, which is a favorite beverage throughout Brittany, and for which there is a particularly large demand this year because of the failure of the wine crop.

CALIFORNIA PRUNES AND APRICOTS.

The failure of the fruit crop has also resulted in the almost complete surrender of the market for prunes and apricots to California. Last year several hundred tons of California prunes and apricots were marketed here. This year the quantity will be trebled. Local brokers and importers complain of the excessive freight rates from New York to Nantes and are very anxious to see a direct line of cargo steamers from Nantes to New York. It cost about \$1 a barrel for the hauling and handling charges on dried fruit from New York to Nantes via Havre or Bordeaux, and this is regarded as excessive, particularly in view of the fact that the charges to Havre are only 60 cents a barrel.

BENJ. H. RIDGELY, *Consul.*

NANTES, FRANCE, *October 1, 1903.*

HOW CANADIAN FRUIT IS EXPORTED.

(From United States Consul Shepard, Hamilton, Canada.)

The Hamilton consulate is in the heart of Canada's great fruit-growing district, and hence an important shipping point. The Niagara district is about 50 miles in length and averages 10 miles in width, though at some points within a distance of about 20 miles from this city eastward the finest fruit lands are not more than 2 miles in width. There is nothing in the fruit line that can be raised in this climate but what is grown in profusion—apples, pears, cherries, peaches, plums, grapes, and berries of all varieties. Apples, however, pay the best, for rarely is there a failure in the crop, and there is always a foreign demand for the surplus.

This year the apple crop is good and nets the grower \$2 per barrel of 3 bushels, though fancy fruit, weighing 7 ounces and more, packed in bushel boxes, brings as high as \$1 per box. Fancy apples for the British market are examined, and all having any blemish are thrown out. Each apple is wrapped in tissue paper, as the orange growers of California pack their fruit, and then carefully

laid in a row in the box, so that in the handling of the packages the fruit will not be bruised.

Mr. Linus Wolverton, living near Grimsby, has a large fruit farm, 50 acres of which are devoted to apple culture. He has made a special study of fruit raising, having been for years secretary of the Ontario Fruit Growers' Association, and is editor of a magazine principally devoted to fruit culture. From him I have gained information that may be profitable to the fruit growers of the United States. He has found that it pays to be careful in the packing of fruit for the foreign markets, as there is always a good demand for it, and at prices much higher than can be realized at home. Apples wrapped in tissue paper and packed in bushel boxes will always pay a better profit to the shipper than those packed in the ordinary way in barrels. Some consignments that Mr. Wolverton shipped to the English markets in boxes returned him as high as \$1.50 per bushel after all expenses were paid.

Apples and pears are the most profitable fruits to raise for export. Plums and peaches are more uncertain, as, while they would pay well if landed in good order, only the hardier varieties will stand shipment.

The Canadian steamship owners have fitted their vessels with cold-storage rooms and ventilating fans in order to secure the export trade in fruit, the government giving them assistance at the outset. Fall apples and pears are generally shipped in cold storage, but the winter fruits can be safely transported in the holds of vessels fitted up with fans. It has been demonstrated that the principal cause of the rotting of fruit shipped in the ordinary way is the foul air that gathers in the holds of the steamers. The fans obviate this by keeping a constant circulation of pure air and a cooler temperature. Choice apples and pears packed in boxes are shipped in cold storage, while the same fruit in barrels is shipped in the holds purified by ventilating fans. The difference in freight charges is considerable. Occasionally a shipment in cold storage or in the part ventilated by fans arrives at its destination in bad order because of neglect to keep the temperature uniform. The fruit is usually packed before it is thoroughly ripened, and the temperature should be from 40° to 50°—never higher—to keep it in good condition. It takes about twelve days for a shipment of fruit from Hamilton to reach Liverpool. Of pears the Bartlett is the best for export trade. This year shipments in half-bushel boxes have netted the shipper as high as \$1.50 per box. Grapes can only be shipped in cold storage, and if carefully packed can be profitably exported.

JAS. M. SHEPARD, *Consul*.

HAMILTON, CANADA, *October 30, 1903.*

FRUIT GROWING UNDER GOVERNMENTAL AID.

(From United States Commercial Agent Beutelspacher, Moncton, New Brunswick.)

The government of New Brunswick, through the department of agriculture, is preparing to operate a number of orchards or direct the operators, beginning next spring, with the object of encouraging and bettering the fruit industry in this Province.

Arrangements have been made with the owners of several farms and the idea is ultimately to have one orchard in every county.

For the first year, however, but four or five will be conducted. The government is to furnish the trees and to send a man to direct the proper planting and laying out of the orchard. Mostly winter varieties of trees will be planted. Apples will chiefly be grown, but some plums will also be planted.

The trees being properly set out, the owner of the land must sign an agreement for ten years that he will attend to the orchard according to directions and instructions of the department of agriculture, which will be kept up to the latest methods of horticulture. The owner of the orchard will have the product. The orchard will vary from 1 to 2 acres in extent and 50 to 100 trees will be planted.

They will be set in rows, trees 30 feet apart. On each side of the row a space $7\frac{1}{2}$ feet in width will be kept absolutely free from growth and cultivated from time to time. Before winter a cover growth of clover will be planted on this strip.

It is stated that this orchard work has been successfully introduced in Nova Scotia, and hopes are entertained that much good to fruit growing in New Brunswick will result.

GUSTAVE BEUTELSPACHER,
Commercial Agent.

MONCTON, NEW BRUNSWICK, *November 13, 1903.*

PRUNE DRYING IN BOSNIA.

(From United States Consul Chester, Budapest, Hungary.)

The prune trade of Austria-Hungary demands that the prune-drying industry of Servia, which is most famous, be domesticated, improved, and cheapened. The Bosnian provincial government since 1878-79 has done much, and the provincial government of Croatia-Slavonia is also anxious to perfect the production of prunes, as well as the hitherto manufactured prune jam, within its borders. The

following description of prune drying in Bosnia, prepared by Prof. J. Ravic, has appeared opportunely in the principal Croatian agricultural organ:

After the plums have been shaken off and gathered in one place, women and children sort them. The bruised and slit prunes are used to make plum brandy (silvorium, slivovitz). The perfect prunes, arranged in rows on racks, are put into the drying room and undergo a twenty-four hours' process, as follows: A steady, but not too strong, fire is built, watched by at least one person over night, as a too hot fire causes the plums to swell and burst. The burst prunes are called "purci," and when cool become as hard as stone and are then called "gorupan." Prune shipments mixed with these bring poor prices, as they are often refused by the purchaser. Insufficiently cooked prunes are called "parnice," and lots containing these or "gorupan" are confiscated at once on discovery in the market where they are found by the "prune commissioner," though appeal is allowed to an "examining board."

First-class large prunes are assorted either before being placed on the market or after the drying, before being packed up in bags. Each drying rack produces from 8 to 10 okes (25 to 30 pounds) of prunes, and the drying goes on for a month, if the dryer has a good-sized orchard. The merchants receive the prunes, sift and sort them according to eight grades (from 70-75's to 115-130's per pound), and appraise them anywhere from 8 to 100 crowns (\$1.62 to \$20.30) per 220.46 pounds, according to quantity and quality.

Bruneck, on the Save River, is the chief emporium for Bosnian prunes. In times of medium crops some 440,092 pounds find sale there, bringing 80,000 crowns (\$16,240) to the Bosnian growers.

The best and handsomest prunes are obtained by drying them in modern drying rooms, according to the "Ryder" system, which is sold by Ph. Mayfarth & Co., in Vienna—No. 2 costing 390 crowns (\$79.17).

Plums should be left on the trees until the skins wrinkle around the stem, when the fruit is ripe. They should be picked instead of shaken, to avoid collecting small and dwarfed ones; and they should be placed in the sunlight for a day or two, as it takes plums longer to dry than all other fruits.

The plums are dried in all ways from top to bottom. If allowed to cool a little in the air at times during the drying they keep their beautiful blue color and are sooner dried. If, after drying, they are plunged into cool water containing melted sugar, it gives them a beautiful dark luster, which raises their market value. Italian and Bosnian prunes are often slit, stoned, and stuffed with smaller prunes, and dried at 40° C. It is these, and stoned prunes, which are boxed and shipped to England and the United States. In Styria (Austria), on the other hand, plums are skinned, exposed for two hours to sulphur fumes, and then stoned and dried for two days, instead of one, as in Bosnia. "Prunelles" are easily skinned after dipping in boiling water for a moment, and, if not dryable in one day at 40°, can be dried the next at 55° to 56° C. Stoning is done through the end of the prune by pressing with a goose quill or wooden stick at the other end. The custom in France of placing laurel leaves between the layers of boxed prunelles to give a pleasant odor and covering them with paper to keep out worms is recommended to the Croatians.

FRANK DYER CHESTER,

BUDAPEST, HUNGARY, *October 22, 1903.*

Consul.

ESCULENT TUBERS AND VEGETABLES IN LIBERIA.

(From United States Consul-General Lyon, Monrovia, Liberia.)

The following information upon the subject of vegetable production and esculent roots sold on market days at Monrovia is submitted:

The most common are the sweet potato, cassada, yam, and tania. The cassada is a root varying in size from 6 to 18 inches in length and from 3 to 8 inches in circumference. When it is cooked it tastes very much like a fresh chestnut. This root is the vegetable most extensively cultivated by the natives, and forms, with the rice, their chief diet. The fecula of the cassada is made into tapioca. The yam is another popular root. It is like the cassada, but much larger. Some are 3 feet long and weigh from 20 to 30 pounds. It is more farinaceous than the cassada when cooked, and in this quality resembles the Irish potato. It is more palatable than the cassada and a more wholesome and nutritious article.

The garden vegetables are lima beans, snap beans, black-eyed pease, cabbages, tomatoes, cucumbers, beets, and peppers. Very few of these, if any, equal in size those raised in the United States. This is due, perhaps, to the fact that not much attention is given to their proper cultivation. In addition to these are the plantain, the banana, okra, papaw, and the sour and sweet sop. Many species of leaves are used as greens in the same manner as kale, etc., in the United States. The plantain is a fruit cylindrical in shape and somewhat tapering toward the end. It is of a pale green color, but when ripe is yellow. It is prepared for the table by being either boiled, baked, or fried, and is not only luscious, but among the most wholesome of the tropical vegetables.

These constitute the chief articles of food and are in great demand on market day. Very little meat is eaten, perhaps on account of its scarcity. Fish is not plentiful during the rainy season. The sea is rough and the native fishermen hesitate to brave the perils of the sea, notwithstanding that many of them are experienced seamen and can swim almost like a fish itself.

ERNEST LYON, *Consul-General.*

MONROVIA, LIBERIA, *October 5, 1903.*

ITALIAN CHESTNUTS AND CHESTNUT TREES.

(From United States Consul Cuneo, Turin, Italy.)

The chestnuts exported from Turin to the United States during the year ended June 30, 1903, were valued at \$12,762. The crop this year, I am informed, while not large, will be excellent.

Chestnuts form an important article of food in Italy. They are large and four or five times the size of chestnuts grown in the United States. This, I think, is mostly the result of cultivation. They are numerous in variety and flavor, and I have often wondered why they have not been introduced and grown in some sections of the United States.

In Italy the peasant takes great care of his chestnut grove—more than some Americans do of their apple orchards. Old and barren trees are removed and in their places young ones are planted. The young trees, when of sufficient growth, are carefully budded. The following is the manner and system of budding:

In the spring, when the sap is fully matured and flowing freely, the cultivator climbs the tree he wishes to reproduce, selects a young and tender limb—say, about three-fourths of an inch in diameter—cuts off the end of the branch, turns the bark down a little, then with his finger and thumb, by gentle twists, loosens the bark the entire length of the branch, circles the branch about one-half inch either way from the bud, pulls off the rings, puts them in a pocket which he carries before him—same as carpenters carry nails—and, when he proceeds to the young trees, cuts off the ends of limbs or branches that he wishes to bud, pulls down the bark to the desired place and then, just as a ring is put on the finger, he puts one of the rings on the end of that branch. This he does snugly, for it must not be too tight or too loose, but fit so that the sap from below will communicate with and circulate under it. The bud on the ring will then grow and in due time reward the intelligent operator with the same kind of chestnuts borne by the trees from which he took the buds. In this manner I have seen wild, worthless trees budded and made to bear excellent fruit. The same process is practiced in the productions of elastic willow twigs, for in these grape-growing regions willow twigs are much used in tying the grapevines to trees or frames.

As the chestnut tree is not native to Italy or to any other country in Europe, being an importation, there is no reason why the tree can not be imported into the United States and thrive equally well.

PIETRO CUNEO, *Consul.*

TURIN, ITALY, *October 6, 1903.*

WHEAT CROP IN FRANCE.

(From United States Consul Ridgely, Nantes, France.)

It may now be stated positively that in this part of France there will be no considerable market this year for American or other foreign wheat. This is due to the abundant French crop and the relatively moderate prices. Last year French wheat, having touched the unusual price of 24 to 25 francs (\$4.63 to \$4.82) per 100 kilograms (220 pounds), American wheat, notwithstanding the French customs duty of \$1.35 per 100 kilograms, found a very considerable market in France. This year, however, the large crop has served to bring the price of French wheat down to 20 francs (\$3.86) per 100 kilograms. American wheat is now quoted at 16 francs (\$3.08) f. o. b. Marseilles, with 7 francs (\$1.35) extra for the customs duty, bringing it up to 23 francs (\$4.43) per 100 kilograms (220 pounds).

Nantes is not a very important market for wheat, as the mills here are of rather limited capacity and grind only for the region of the lower Loire. Some of the millers are direct importers, principal of which are the following: La Société des Moulins Nantais, Nantes, Loire Inférieure; La Minoterie Laraison, Pornic, Loire Inférieure; La Société des Moulins Brestois, Brest, Finistère.

The most important brokers importing wheat at Nantes are Loiret & Haentjens, Rue de la Fosse, Nantes.

BENJ. H. RIDGELY, *Consul.*

NANTES, FRANCE, *November 5, 1903.*

WHEAT CROP IN FRANCE FOR 1903.

(From United States Commercial Agent Griffin, Limoges, France.)

The convention of French millers was recently held in Paris and one of the conseil d'administration, who resides in this consular district, has kindly furnished this office with a copy of the report, of which the following is a summary:

The harvest of wheat has been unusually good this year; it is one of the largest that France has ever gathered. The prices are well maintained and the farmers are selling off their crop advantageously. If they should hold the grain until later in the season, especially as late as the spring, the prices may fall if the weather during the winter be normal, the demand small, and the quality of the wheat deteriorates.

Very little hard wheat is planted in France, and the factories manufacturing macaroni, vermicelli, and kindred alimentary pastes buy from Switzerland, Italy,

and the Black Sea districts. Nearly all the factories of these commodities are situated near the Swiss and Italian frontiers or the Mediterranean sea coast, with the exception of small factories at Clermont-Ferrand and Albi.

These manufacturers buy all their grain in Marseilles, at which port all imported by water enters. Although this grade of wheat is relatively low priced, the middlemen merchants have to handle large quantities of other grains to keep up their trade; the quality is irregular and all is foreign.

If macaroni wheat from the United States were introduced into France by active, energetic Americans they could open an excellent market in this kind of grain. The customers are, as a rule, reliable.

The following data is taken from official figures given by the French Minister of Agriculture and the Bulletin des Halles.

The entire French wheat crop for 1903 is 126,256,400 hectoliters (358,315,663 bushels); this is the largest harvest ever gathered, with the exception of the crops of the years 1874, 1898, and 1899, which were as follows:

Year.	Quantity.	
	<i>Hectoliters.</i>	<i>Bushels.</i>
1874	133,130,163	377,823,402
1898	128,006,149	363,536,871
1899	128,418,920	364,452,895

The production this year would have been much larger if the surface sown had not been smaller than usual and the season in some districts more propitious.

The crops in 30 Departments were excellent, in 46 good, and in 11 passable; the finest harvests were in the center and southern parts of France. Much of the winter wheat was destroyed by the severe frosts and unfavorable weather since planting. Granting that the surface sown is smaller than that of 1902, if the seasons had been as good as in previous years, the crop would have yielded at least 5,555,189 hectoliters (15,765,626 bushels) more. The quality of the grain is as varied as the conditions under which it grew and ripened, consequently there will be a diminution in the quantity of flour and bread made from it, and this will differ according to its keeping qualities.

The figures given by the Minister of Agriculture are as follows:

Year.	Acreage sown.	Production.	Production per acre.
	<i>Acres.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1898.....	17,207,330	363,536,871	21.15
1899.....	17,143,642	364,452,895	21.27
1900.....	16,961,117	325,549,477	19.45
1901.....	16,787,437	310,970,473	18.54
1902.....	16,839,830	352,753,753	20.95
1903.....	16,158,304	358,315,663	22.11

An inquiry made as to the consumption of bread in France has shown that it is diminishing annually in the cities and rural districts.

The amount of butcher's meat, poultry, and vegetables eaten are replacing, in a measure, the quantity of bread consumed. Instead of giving children, when they return from school, dry bread to eat, they have fruits (dried or fresh), chocolate, cheese, etc., added to the piece of bread, which is consequently reduced in size. Then, adults often take a glass of wine or other beverage at 4 or 5 o'clock, in place of the ordinary bread.

WHEAT CONSUMPTION OF FRANCE.

It is generally admitted that about 123,000,000 hectoliters (349,074,000 bushels) of wheat are sufficient to supply the demand in France—14,000,000 hectoliters (39,732,000 bushels) for seed and 109,000,000 hectoliters (309,342,000 bushels) for human consumption and the manufacture of alimentary articles of food, such as macaroni, vermicelli, etc. These 109,000,000 hectoliters of wheat weigh about 77 kilograms per hectoliter (154 pounds per 2.838 bushels), making a consumption of wheat of 8,393,000,000 kilograms, which, when ground into flour, render 5,875,100,000 kilograms (66,082,886 barrels of 196 pounds each). When the grain is of prime quality 100 kilograms (220.46 pounds) of flour make 130 kilograms (286 pounds) of bread, according to the ordinary manner of calculation, but the official weight for the Department of the Seine is 128 kilograms (282 pounds) of bread to every 100 kilograms (220.46 pounds) of flour. If the percentage of gluten be low, then it takes more flour to make 100 kilograms of bread. Last year it was very low and this year it will probably be about the same.

BREAD CONSUMPTION IN FRANCE.

Granting that 100 kilograms (220.46 pounds) of flour make 128 kilograms (282 pounds) of bread, then the 38,641,333 inhabitants of France will consume 7,520,128,000 kilograms (16,578,940,189 pounds) of bread during the coming twelve months, a little more than 194 kilograms (428 pounds) per annum per individual, without any reference to the age.

Mr. Morel, syndic of the Paris bakers, has taken the trouble to analyze the per diem manufacture and consumption of bread in Paris, viz, bakers, 2,092; flour consumed, 591,199.2 kilograms (1,305,457 pounds); bread consumed, 753,120 kilograms (1,660,328 pounds)—giving for the 2,714,068 inhabitants of Paris 0.277 kilogram (0.6 pound) of bread per person.

It will be seen that the Parisians do not eat the average quantity of bread daily estimated for all France. This is true of nearly every French city. The proportion of bread to the inhabitant is smaller than in the rural districts.

The importations of wheat this year into France (taking the proportion imported during 1902 as a base) will probably be 3,000,000 hectoliters (8,514,000 bushels) from all sources. This quantity may be increased if the domestic wheat does not give the usual proportion of flour, or if the quality of it is below normal; then the importation of prime flour or grain will be necessary to mix with the inferior domestic.

WALTER T. GRIFFIN,

LIMOGES, FRANCE, *November 9, 1903.*

Commercial Agent.

FRENCH SUGAR HARVEST OF 1902-3.

(From United States Consul Haynes, Rouen, France.)

The official statistics of the French sugar crop of 1902-3 have just appeared. The number of factories in operation was 319, 13 less than the year before, when only two factories in the whole of France were idle. The beets sold amounted to 6,266,946 tons, or nearly 33 per cent less than the previous year. This was the result of the sugar crisis, which compelled manufacturers to offer low prices. The acreage planted decreased nearly 44,000 acres. The

average capacity of all the factories was 19,645 tons of beet roots, or about 320 tons each per day of twenty-four hours, as against 329 tons in 1901-2 and 298 tons in 1900-1901. This average capacity is considerably less than that of German and Austrian factories. The average density of the roots was 8.0, with variations to 8.3 in the Department of Oise and 7.8 in the Departments of Nord, Pas-de-Calais, and Somme. The amount of sugar produced in 1902-3 was 735,708 tons, as against 992,579 tons in 1901-2. The yield of the roots, in refined sugar, in 1902-3 was greater than has ever been known in France, being 12.38 per cent. The previous year it was 11.24 per cent.

Since the Brussels sugar conference the French sugar industry is being watched very attentively, and it is destined to give some very valuable lessons.

THORNWELL HAYNES, *Consul*.

ROUEN, FRANCE, *October 21, 1903.*

FRENCH-ITALIAN COMMERCE.

(*From United States Consul Haynes, Rouen, France.*)

The commercial rupture between France and Italy occurred in 1887. In 1888 the exterior commerce of Italy diminished nearly \$95,000,000. The importations from France decreased more than \$37,500,000 and the exportations to France fell nearly \$55,000,000. This loss was slowly regained in relations with Germany, Austria, Russia, the United States, and the Central and South American States.

The French tariff of 1892 and the Italian tariff of 1889 influenced very slightly the commercial relations of the two countries. These two laws placed the maximum tariff upon each country's imports from the other.

The commercial accord under which the trade of the two countries is now carried on dates from November 21, 1898, when the reciprocity treaty was signed by the Italian ambassador and M. Delcassé at Paris. By this treaty France applies the minimum tariff to Italian products, silks excepted, which if of pure Italian origin are still taxed \$115.80 per 220.4 pounds, while Italy in return allows to France the most favored clause, silks excepted.

In 1896 the exterior commerce of Italy, which in 1894 had touched its lowest point, began to grow better. Its commerce, however, sensibly diminished in 1897 and 1899, its exports and imports averaging for each of these years \$289,500,000, with a difference of \$25,550,000 in favor of imports. In 1898 Italy exported \$25,862,000

worth of merchandise to France and imported from France \$26,827,000. In 1902 the figures were, respectively, \$28,618,000 and \$32,971,000. From these figures it can be seen that the treaty of 1898 gave a decided impetus to trade, though as yet it is far from attaining the amount exchanged in 1887 at the time when the then existing commercial treaty with France was denounced. It has not even reached the figure to which the exchanges fell the year after the rupture.

In the treaty of 1898, as will be seen, each country reserved the tariff on silks, and yet despite this France furnished Italy, from 1897 to 1902, an average of \$8,000,000 worth of silk and raw silk against some \$6,000,000 entering France from Italy. Besides the restrictions on silks both nations reserve the right to increase the tariff on any import, provided no other nation is more favored. France raised the tariff on meats and live stock.

In 1901 Italy imported from France goods to the value of \$21,064,792, consisting of wines, spirits, oils, sugar, wools, silks, velvets, laces, autos, skins, metals, precious stones, codfish, dress goods, etc.; while the imports from Italy into France amounted to only \$6,503,290, consisting of fowls, eggs, cheese, fruits, oils, woods, hemp, wines, minerals, glassware, silks, furniture, hatters' straw, etc. On the foregoing the Italian customs collected on the imports from France \$4,205,676, or 19 per cent, and the French customs collected on the imports from Italy \$819,362, or 12.5 per cent.

The feeling of friendship which has been growing for several years between the two countries is having a beneficial effect on their commerce, and the future will be watched with great interest.

THORNWELL HAYNES, *Consul*.

ROUEN, FRANCE, *October 21, 1903.*

RUSSIAN GRAIN-SHIPMENT REGULATIONS.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

In order to check the frauds which were a marked feature of the grain shipments from southern Russia, a special department has been created by the stock exchange of Odessa. A committee of the bourse, which is supervised by the Minister of Finance of the Empire, has adopted a set of rules and regulations which in the main follow those of the New York Produce Exchange. They fix the time when sales shall take place at the bourse, give official quotations of prices for sales effected, and establish standards for various kinds of grain, fixing the weight and amount of admixtures thereof.

Samples are to be exhibited at the bourse and sellers will be held responsible when deliveries do not equal sample.

A special bureau has also been established to collect information on all matters pertaining to grain in different parts of Russia, and an arbitration and supervisory committee, composed of the most reputable merchants of Odessa, has been appointed to inspect grain shipments, decide disputes, adjust claims, etc.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 18, 1903.*

ORIENTAL EFFORTS TO GAIN RUSSIAN TRADE.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

The Japanese Government is about to create a number of new consulates in Russia for the primary purpose of fostering the exportation of Japanese goods to that country.

A result of the recent investigating tour of several Chinese merchants in Russia is the organization of Chinese department stores in Moscow and St. Petersburg, to be followed up by the establishment of branch stores in Warsaw, Vilna, Kief, Riga, Helsingfors, and Odessa. These department stores will only sell Chinese products, and their salesmen and commercial travelers are to be Chinamen.

A report was published in the CONSULAR REPORTS some three years ago* advocating the establishment of American stores—that is, stores for the sale of American products—in the leading cities of Europe. That idea, totally ignored by American exporters and manufacturers, is now about to be adopted in Russia by the Chinese.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 18, 1903.*

RUSSIAN FOREIGN TRADE NOTES.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

Russian butter for South Africa.—The Russian Ministry of Finance has taken steps to encourage the exportation of Russian butter to South Africa. The value of butter imported by that colony in 1902 was £400,749 (\$1,950,246), supplied by Australia, New Zealand, Argentina, Canada, England, and Denmark.

* CONSULAR REPORTS No. 242, p. 356.

Grain agents in European ports.—The produce exchanges of the Russian Black Sea ports (Odessa, Nicholaiev, and Rostoff) intend to locate agents at the ports of Hull, London, Rotterdam, Antwerp, Hamburg, and Marseilles for the purpose of watching the arrivals of Russian grain cargoes and frustrating the fraudulent practices which have brought Russian grain into disrepute.

Russo-Japanese trade.—The trade between Russia and Japan has largely increased within the last decade. During the past year 316 Russian vessels, aggregating 466,000 tons, arrived in Japanese ports, which tonnage was only exceeded by British and German shipping. The value of Russian petroleum exported to Japan last year amounted to 2,800,000 yen (\$1,394,400).

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 7, 1903.*

RUSSIAN RAILROAD EARNINGS.

(*From United States Commercial Agent Greener, Vladivostock, Siberia.*)

A special committee is sitting at St. Petersburg whose duty it is to find ways and means to make the railroad business of Russia less unprofitable. An Odessa newspaper estimates that the average annual outlay of the country, expended by the treasury on railroads, amounts to \$196,000,000.

It is well known that the direction which railroads have taken was not determined so much by the object of supplying the needs of the people as by the necessity of rendering indirect help to the coal and iron industries.

The question of struggling against the unprofitableness of the railroad business is a very difficult and complicated one. But for a country like Russia, where the most pressing needs of the population remain unsatisfied mainly on account of lack of means, where the urgent necessity of introducing universal elementary education would require an additional outlay of \$51,500,000 per year, the expenditure of hundreds of millions on railroads is indeed a serious matter.

Germany has contrived to bring her financial business to such perfection that her railways need no assistance from the treasury. On the contrary, they turn considerable sums into the treasury.

R. T. GREENER,
Commercial Agent.

VLADIVOSTOCK, SIBERIA, *September 8, 1903.*

TRADE OF MOSCOW IN 1903.

(From United States Consul Smith, Moscow, Russia.)

The present depressed trade conditions of Moscow do not differ materially from those of a year ago. With but few exceptions factories have kept in operation, but in some cases with a much reduced force of employees.

The exports to the United States from the consular district of Moscow during the fiscal year 1903 amounted to \$6,402,481, an increase of \$1,520,477 as compared with 1902. The principal articles were wool, hides and skins, furs, rubber waste, and silverware; less important articles being egg albumen, blood albumen, tea, linen, soap, perfumery, and grass seed. During the quarter ended September 30, 1903, the exports to the United States amounted to \$2,553,212, an increase as compared with the same quarter in 1902 of \$245,756.

The principal articles imported into this district are mechanical and agricultural machinery, hardware and cutlery, cotton, raw copper, cash registers, typewriters, office furniture, bicycles, etc.

American automobiles are as yet very few in number here, their cost being prohibitive except to the rich; besides, the highways and the city streets are not kept in the best condition for automobiles.

Building and other improvements have been continued uninterruptedly in all parts of this district. A great number of business, private, and hotel buildings have been completed during the year.

Electric tram-car lines are being erected in all the principal streets of Moscow, the work being done by the municipality.

SAMUEL SMITH, *Consul.*

MOSCOW, RUSSIA, *October 31, 1903.*

TRADE IN RUSSIA.

(From United States Consul-General Holloway, St. Petersburg, Russia.)

Russia is still laboring under the financial depression that commenced about five years ago, that grew out of a succession of crop failures and losses in manufacturing enterprises, as well as large expenditures to complete the Siberian railroad and purchase other railroads, many of which are operated at a loss to the Government. In addition the Government has been building new roads, which will not pay expenses for some years, with the hope of developing the country through which they pass. This was done in preference to improving existing roads already overcrowded with traffic, and

now that a good crop has been produced the railroads leading to Odessa and Nicolaev, as well as to other ports in Russia, are unable to handle the trains rapidly enough, hence numbers of trains are lying on side tracks en route, while 40 or 50 vessels are anchored outside in Black Sea ports awaiting cargoes.

The banks have been unusually conservative and are laboring to regain the losses of the past few years and but few paid dividends. It is stated that while gold coin remains in circulation in St. Petersburg and Moscow, it has almost disappeared from ordinary trade channels throughout the remainder of the Empire.

All sorts of manufacturing where iron is a factor is still paralyzed, with no prospect for betterment in the near future. Americans who visited Russia during the past year with a view of entering into business here, except in one or two cases of mining, decided not to do so and returned home.

The proposition to convert the street-car lines of St. Petersburg to an electrical system still hangs and nothing is done so far as the public is advised. The lines are single track and the cars are drawn by horses.

The petroleum, cotton, and iron industries are particularly dull.

The total value of declared exports to the United States from the consular district of St. Petersburg during the fiscal year 1903 amounts to \$878,597.43. Compared with the fiscal year ended June 30, 1902 (\$1,030,887.01), this represents a decrease of \$152,289.58.

W. R. HOLLOWAY,
Consul-General.

ST. PETERSBURG, RUSSIA, *September 30, 1903.*

BUTTER INDUSTRY OF SIBERIA.

(From United States Commercial Agent Greener, Vladivostock, Siberia.)

Early in the year there was a meeting of butter manufacturers at Kurgan. With them the commercial department of the Great Siberian Railroad and the Society for Developing Siberian Village Communities are cooperating. A second meeting at which the three interests were represented was held at Tomsk.

Formerly, in the Trans-Baikal Provinces, at Tsasetchue the cream butter was prepared in the primitive way; now there is a butter factory, with separators, with a capacity of 542 pounds per day, hand worked, but it is proposed to introduce steam power.

Manchuria requires during the summer and fall 10,833,600 pounds of butter. The Trans-Baikal section of the great Siberian Railroad

has prepared the necessary refrigerating cars, boxes, and cold storage, and 7,222,400 pounds has already been shipped to meet this demand.

The Imperial Government will subsidize the Siberian butter industry by a loan of 2,000,000 rubles (\$1,030,000), for five years, with interest at 4 per cent.

The markets of Manchuria, the Amur Provinces, Japan, the coast of China, and the Philippine Islands give promise of a great future for the Siberian butter business. To encourage the transportation of butter the Chinese Eastern Railroad Company has introduced refrigerator cars and established ice houses at some of the principal stations and at Dalny.

It is hoped that Siberian butter will in time reach Vladivostock. At present the majority of its citizens are obliged to use either plain margarin or margarin mixed with Siberian butter.

Until 1895 no butter was manufactured in Siberia for export. At present there are about 2,000 butter-manufacturing establishments, the output of which is over 90,270,000 pounds per annum, of which 18,056,000 pounds are exported, valued at \$10,300,000.

The Siberian Railroad promptly offered inducements to this business, and within three years of its completion 1,000 butter manufactories were erected.

Owing to the lack of experienced managers and workmen the butter is not of an entirely satisfactory quality. Its value in London is less than that of butter coming from Denmark and Finland. The Government is assisting the manufacturers by sending special butter-making instructors, who not only show the people a more efficient and satisfactory way of making butter, but induce them to form co-operative associations. In former years only melted butter was made, which brought only \$4.12 per 36 pounds, and the price of milk averaged but 20 kopecks (10.3 cents) per 36 pounds. Now, when butter is prepared in the new manner for export, the price of milk is 45 kopecks (23 cents) per 36 pounds.

The first foreign butter-making firm made its appearance in Kurgan in 1896. The firm imported the necessary machinery and started the business of buying up butter. At present there are in Kurgan alone about twenty export offices and as many in Omsk. They have branch offices in villages and at several railroad stations. All but one of these firms are Danish.

Among the exporters there is not a single Russian firm. Last year the Government was rushing the manufacture of refrigerator cars, but the demand therefor is still much greater than the supply.

Cooperative butter-producing establishments are increasing. The producers have come to recognize the efficiency and advantage of

cooperative associations, and many private butter-making establishments are joining the cooperative associations.

In order to disseminate the knowledge of modern and improved appliances in the business of butter making in western Siberia the Government is opening free courses on the subject in the village Youryevskoy, in the Tobolsk Province. The lectures will take place annually, from September 27 to December 14. The programme of studies will include the theory and practice of butter making, milk bacteriology, the taking care of cattle and calves, and the sowing of grass.

Persons of both sexes not under 18 years of age, and knowing how to read and write, may attend these courses.

R. T. GREENER,

VLADIVOSTOCK, SIBERIA, *August 29, 1903.* *Commercial Agent.*

HORSES AND HORSESHOEING IN SIBERIA.

(From United States Commercial Agent Greener, Vladivostock, Siberia.)

Before the occupation by Russia of the Ussuri country and the coasts of the Pacific, the horse was unknown here. The natives were content with the service that dogs and reindeer could render them. The first horse made its appearance with the first Russian settlers. The breed of horses was very unsatisfactory; they came either from Transbaikalia or from Manchuria. During the last few years western Siberia has supplied the Amur Provinces with horses. In 1902 about 1,500 of them arrived in this country.

Dr. Doolsky, a veterinary surgeon, has received permission from the military governor to open a normal and medical horseshoeing establishment.

Hitherto, all horseshoeing has been performed, outside of the cavalry, by self-taught blacksmiths. Naturally the work was crudely, improperly, and often very cruelly done, demanding the intervention of members of the local Society for the Prevention of Cruelty to Animals.

The horses suffered greatly. Hoof diseases were frequent, and the animals soon became worthless. There are about 4,000 horses in this vicinity, not counting artillery and cavalry mounts, driven mostly by Chinese. They are generally Korean ponies, short, stocky, and handy. They stand the climate well, pull most astounding loads, are willing creatures, but are unmercifully beaten. There are few level streets in this city, so most of the work is hill climbing.

Shoes suitable for hill traffic are needed. It is estimated that each of the 4,000 horses needs shoeing at least ten times per year,

at a cost of \$10.87. Fifteen hundred horses would make a good business for the new veterinary, not to mention the humanitarian view of his work. Dr. Doolsky was shown a specimen of the Akron rubber shoe, happily sent to this agency, but what is most needed are specimens of the latest pattern of iron or steel shoes, especially those fitted without nails, easily put on, and readily adjusted. They should be sent via Moscow and marked "samples."

R. T. GREENER,
VLADIVOSTOCK, SIBERIA, *August 13, 1903.* *Commercial Agent.*

NAPHTHA LAKES AND SPRINGS IN EASTERN ASIA.

(From United States Commercial Agent Greener, Vladivostock, Siberia.)

Eastern Asia is one of the richest mineral-fuel regions in the world. The area of all the paying coal layers in Europe comprises only 22,760 square miles, an area equal to that of one of the Russian Provinces—the Kazan Province. The area of coal layers in eastern Asia, though not yet estimated, is considered incalculable.

Beside immense coal beds, eastern Asia possesses wealthy underground naphtha lakes that will soon be the foundation of a great industry. Naphtha springs are found everywhere in China, in Manchuria, in the Ussuri district, in Japan, and on Sakhalin Island. The latter island not only possesses very rich coal mines, but also large naphtha lakes. The chemical engineer, K. S. Platonoff, after having examined the coal beds and naphtha wells in Texas and Pennsylvania, made an investigation of the naphtha springs on Sakhalin Island and on his return to Baku declared that all he had seen in the United States was nothing in comparison to what he found on Sakhalin.

The naphtha springs near the River Nootovo, on Sakhalin, excel those of Baku in every regard. Seven underground naphtha lakes are there, the area of the largest one being 63,000 square meters (75,320 square yards).

Notwithstanding the increased output of the Japanese naphtha industry, Japan must still import foreign naphtha. In 1900 she imported more than 60,000,000 gallons and in 1901 more than 61,000,000 gallons. The export from Japan is inconsiderable, so that the Japanese naphtha does not threaten to become a rival to Sakhalin naphtha. On the contrary, Japan promises to become a good market for the Sakhalin naphtha.

The development of the oil industry on Sakhalin Island will help the river navigation on the Amur and in the Far East generally.

The Ministry of Agriculture and Imperial Properties has ordered that the 33-mile line along the southeastern coast of Lake Baikal be acknowledged as actual naphtha-producing land. It extends from Kultchuoy to the mouth of River Chermshan (54° north latitude), to the north from Svyatoy Noss.

A party of five Englishmen from London arrived recently on Sakhalin to examine the coal-oil regions lately discovered on the eastern coast of the island. Among the party there is one geologist and one engineer.

R. T. GREENER,

VLADIVOSTOCK, SIBERIA, *October 8, 1903.* *Commercial Agent.*

COTTON INDUSTRY OF BARCELONA.

(From United States Consul-General Lay, Barcelona, Spain.)

The extraordinary rise in the price of cotton during 1903 brought about a grave crisis in the cotton industry of this country. This industry is still suffering from the effects of the loss of the colonies, which paralyzed the remarkable development they were undergoing and which had set in with the protective tariff of 1890. A striking proof of this is the fact that between the years 1890 and 1900 the value of the machinery imported amounted to 150,000,000 pesetas (\$21,428,600) in addition to that made in the country. Nearly all these imports figure in the returns prior to the outbreak of the war.

I am indebted to the Fomento del Trabajo Nacional, of Barcelona, for the following interesting information, regarding which no other reliable statistics are available.

Wages in the principality of Catalonia vary somewhat according to the locality, though the working hours are almost uniformly sixty-six hours per week. The following list shows the usual scale of wages in this district:

Workers.	Wages per week.	Workers.	Wages per week.
Mill managers.....	\$5.75 to \$7.25	Spinners	\$3.60 to \$4.30
Foremen and overseers.....	5.00 to 5.75	Doffers.....	1.45 to 1.60
Engineers.....	5.75 to 7.25	Winders.....	1.72 to 2.20
Tenters:		Weavers	3.60 to 5.00
Scutcher and card.....	1.72	Auxiliary skilled laborers:	
Draw-frame	1.72	Carpenters	3.60 to 4.30
Speed-frame	1.72 to 2.20	Blacksmiths.....	3.60 to 4.30

The recent strikes in Barcelona were organized by the operatives of the different trades; the spinners and weavers took no part in them. These strikes were in some cases caused by the demand for

increased wages and shorter working hours, but more frequently they arose from the demand of the operatives to have their unions recognized by the employers and disputes settled, not individually with the work people, but through the respective labor societies. Usually an amicable settlement was finally arrived at between the employers and the men, and the plan of establishing what are known here as "jurados mixtos" (mixed juries), or in other words a sort of arbitration court composed of representatives of both sides to settle all trade differences, is steadily gaining ground. In the important industrial district known as the Ter Valley these jurados mixtos have already been established with marked success.

Statistics are not published showing the number of mills worked by steam and by water power, because in Spain the manufacturer is taxed according to the number of machines used, whether worked by water or by steam, but recent laws provide for the special taxation of hydraulic power. If the Government proposals are passed, the owners of water power will have to pay about 17 pesetas (\$2.55) for each unit of horsepower besides the usual industrial contribution on the number of his machines.

It is estimated that there are at least 550 to 600 cotton-spinning and weaving mills in the Province of Catalonia operated by water power, and these use between 150,000 and 200,000 horsepower. The total available water power not yet utilized in Catalonia is roughly calculated at 500,000 horsepower.

According to official returns there are 346 taxpayers classified as cotton spinners, 1,500,000 spindles (the quantity of cotton imported would require 3,500,000 spindles to work up), and 873 cotton weavers, with 33,282 looms of all descriptions.

The imports of raw cotton at the port of Barcelona during recent years are given as follows: In 1900, 145,639,230 pounds; 1901, 172,179,992 pounds; 1902, 187,456,869 pounds; 1903 (to July), 102,006,480 pounds.

JULIUS G. LAY, *Consul-General.*

BARCELONA, SPAIN, *November 5, 1903.*

CHEAP SHIPBUILDING.

(From United States Consul Metcalf, Newcastle-on-Tyne, England.)

A well-known shipbuilding firm on the Wear has just contracted to build for a Liverpool firm of shipowners a steamer of 6,000 tons carrying capacity for the sum of £34,000 (\$165,461), or a little over £5 10s. (\$26.75) per ton. This is probably the lowest price that has ever been quoted or accepted for a properly equipped cargo steamer, and is but very little more than half what would have been asked for

such a vessel two years ago. It shows clearly how shipping property has depreciated in value, and it also offers a convincing proof of the difficulty of obtaining orders and keeping machinery in operation. If the cost of material had not fallen to a very material extent it would have been impossible for even the most up-to-date shipbuilding concern to undertake work at the price mentioned, as the price of labor has not been lessened to any appreciable degree. A few contracts have, I understand, also been negotiated with Tyneside builders at unprecedentedly low prices, and in some cases it is considered probable that loss may result instead of profit. Shipbuilding firms, however, are, as a rule, so reluctant to reduce their yards to a condition of absolute idleness that they will risk almost any alternative to prevent such a calamity.

The price per ton ranges, however, from £5 10s. (\$26.76) to £8 (\$38.93) per ton, according to class of steamer.

The Press Association says:

The employers in the shipbuilding trade on the Tyne, Wear, and Tees have given notice to the representatives of the Boiler Makers' and Iron and Steel Shipbuilders' societies of a reduction of 5 per cent on piece rates and 1s. 6d. (36 cents) per week on time wages. Representatives of the men have had a conference with the masters, who are very firm on the point. The men have been given a month for consideration. About 14,000 men are affected. Falling off of trade is given as the reason for the reduction.

HORACE W. METCALF, *Consul*

NEWCASTLE-ON-TYNE, ENGLAND, *October 26, 1903.*

IRON AND STEEL TRADE OF THE UNITED KINGDOM.

(*From United States Consul Boyle, Liverpool, England.*)

On the whole the iron and steel trade of 1902 was fairly satisfactory throughout the country, but things might have been very different had it not been for the great activity and prosperity which prevailed in the United States, the result being that large supplies of pig iron and manufactured iron and steel went to that market. There was, however, a serious falling off in the trade of the United Kingdom with the Continent, which had been very good during 1899 and 1900. This is shown in the exports to the Continent and to the United States during the last three years:

Whither exported.	1900.	1901.	1902.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Germany, Holland, and Belgium.....	1,059,174	465,664	289,718
United States.....	133,221	146,815	669,768

It is these extraordinary fluctuations that lead to the great variations in prices. Another remarkable feature of the year has been the continued increase of the imports of iron and steel of all kinds, as shown by the following table:

Article.	1902.	1901.	1900.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Pig iron.....	223,138	195,409	175,393
Bar, angle, and rod iron.....	172,915	98,101	80,129
Steel, unwrought.....	281,013	182,884	179,341
Girders, beams, and steel rails.....	175,170	177,615	131,204
Manufactures of iron and steel.....	451,881	441,188	359,054
Total.....	1,304,117	1,095,147	925,120

These increases are due to the large imports of steel of all kinds from Germany. During the first six months of 1903 there was a sudden revival in the iron and steel trade here, owing to large demands from the United States, and prices underwent a little "spurt" in the months of February and March, but the effect was not permanent. During the last eighteen months nearly 1,000,000 tons of iron and steel of various descriptions were shipped from the United Kingdom to the United States, and even larger quantities were sent from the continent of Europe to the United States. But this demand is almost certain to fall off very shortly, as indicated by the continued increase of the production of pig iron in the United States.

The market here is just now agitated over a threatened "dumping" of iron and steel manufactures from the United States.

The tin-plate trade in England was in a very depressed condition during May and June, 1903, and prices were so low as to prevent manufacturers making a profit, the result being that some works were closed altogether, while others did not work full time.

JAMES BOYLE, *Consul.*

LIVERPOOL, ENGLAND, *October 6, 1903.*

THE FORTH NAVAL BASE.

(*From United States Consul McCunn, Dunfermline, Scotland.*)

Mr. Balfour, Prime Minister, announced in the House of Commons in March of the present year that the Government had decided to establish a naval port and base on the north side of the Firth of Forth, at St. Margaret's Hope. Soon after the announcement the Government, in accordance with its plans, acquired from the Marquis of Linlithgow the lands of Rosyth and additional lands on the east from Mr. Newton, of Castlandhill, and a further slip of land on the

west from the Earl of Elgin, amounting in all to nearly 1,500 acres, at a total cost of £122,500 (\$596,146).

The site for the new naval base is about 3 miles south of Dunfermline, and the northern boundary of the Government's purchase extends to within 2 miles of the southern boundary of the burgh of Dunfermline. On the east, in close proximity to the site of the naval base, lies the village of Inverkeithing, with Queensferry and the famous Forth Bridge, and on the west are the villages of Charlestown and Limekilns.

Government engineers and other officials have taken up residences in Inverkeithing and other places in the vicinity of the site of the base, and initial operations have commenced. Temporary structures are being erected, and contracts for an extensive range of buildings for the Admiralty staff have been let by the Government. On the shore, contractors have a gang of workmen busily employed preparing the ground for the erection of the administrative buildings.

Outside of official ranks little can be ascertained as to the progress that is being made with the boring operations in St. Margaret's Bay. Rumors, however, are current that a seam of coal has been struck at a considerable depth from the sea bottom.

That great advantages are sure to flow to Dunfermline and district from the establishment of the new naval base is a foregone conclusion, the extent of which time only can measure.

Some of the prophecies of increase of land values, increase of population, enormous expenditure to be made by the Government, and the great amount of capital that will be drawn to the vicinity by enterprising investors appear extravagant.

On the other hand, conservative men of affairs and good business judgment confidently predict that the town of Rosyth, the name by which the new town will be known, will some day in the near future have a population of upward of 40,000, and that Inverkeithing, Queensferry, and other places in the district will develop rapidly and share materially in the general prosperity that the annual Government expenditures are expected to bring to this section of Scotland.

The best estimate of the probabilities of the naval base can safely be taken from a statement made by Lord Elgin at a meeting of the Fife County Council, held at Dunfermline in April. His Lordship, who had an interview with responsible officials of the Admiralty with a view to ascertaining the probable extent of the works in the vicinity of St. Margaret's Hope and the size of the population, learned that the Admiralty officials expect to complete the naval base within ten years, and that the number of seamen serving on board the ships stationed at St. Margaret's Hope will then be 5,000. Besides this there will be in the neighborhood of the base dwelling houses for

the families of the seamen and barracks for the marines and others connected with the ships and workshops. In view of this responsible officials advised his lordship that those laying pipes for a water supply to this spot at the present time would not be wise to lay pipes for a less population than 30,000 within twenty years.

Taking into consideration this conservative estimate from reliable Government officials and the probability that extensive dockyards may also be constructed, the more extravagant estimates do not appear unreasonable.

J. N. McCUNN, *Consul*.

DUNFERMLINE, SCOTLAND, *October 22, 1903.*

BRITISH DEPARTMENT OF COMMERCE SUGGESTED.

In its issue of September 24, 1903, the Commercial Intelligence contained an article of considerable interest not only to English readers, but to all countries interested in extending trade. It says:

The changes which are taking place in the constitution of the Cabinet make the time opportune for suggesting that the Prime Minister should seize the occasion to create a Minister of Commerce. It is surely an anomaly that a great trading nation like the United Kingdom should divide the administration of trade and commerce between the Board of Trade, the Foreign Office, and the Home Office. "This cumbersome system," writes a leading parliamentary authority, "ought to be done away with and the great interests of commerce intrusted to the care and responsibility of one department, with a staff solely for that purpose and acting, where necessary, with the Foreign Office." At the head of this department should be a minister endowed with the highest Cabinet rank, who should have the assistance of a permanent board of advisory officials, each an expert in the various subdepartments, which should constitute the ministry. Most of the present departments of the Board of Trade should hold their place in this reorganized office. The commercial department and the Foreign Office should merge in it, and the consular service should be administered by the minister of commerce. There can be little doubt that such an arrangement as this would serve the best interests of the country and insure our trade and commerce that attention from the Government which it is now denied. It is sufficient to glance at some of the anomalies and disabilities which press most hardly on our business men to see how strong a case there is for immediate reform. Much of the merchant-shipping legislation is obsolete. In spite of recent amendments our patent laws are in a most unsatisfactory condition and afford a striking contrast to similar legislation in the United States. Our consuls, despite the fact that some of them at least are earnest and thorough, do not command the confidence of business men. Moreover, our consuls do not have a fair chance to do themselves justice. Their reports, often belated enough before they reach this country, have then to filter through the Foreign Office and the Board of Trade before they reach the British merchant, whose interest in the matters with which they deal has often entirely vanished long before these documents reach

him. We ought to have a thoroughly efficient system under which British consuls and commercial attachés throughout the world could send their "news"—while it is news—straight to the British trader at home, something after the fashion that is adopted in the United States. No one who has studied the question can doubt that our railway and canal systems, charges, etc., are in need of thorough reform. The Board of Trade as at present constituted has altogether insufficient powers to safeguard the interests of traders. It is little short of a scandal and a disgrace that a commercial nation should be content to have at the head of its Board of Trade a gentleman who, however estimable in his private capacity, has absolutely no business training or other qualifications fitting him to occupy that very important position. We need a minister of commerce, and if the Prime Minister should seize the present opportunity to create this office and appoint to it a thoroughly efficient statesman he would do much to restore confidence among business men in an administration that has so far been marked chiefly by its capacity for muddling and mismanagement.

WOOLEN-CLOTH INDUSTRY OF HUDDERSFIELD.

(From United States Consul Stone, Huddersfield, England.)

The condition of trade and industry in the Huddersfield district during the year ended June 30, 1903, has not been satisfactory. Trade has fallen off to some extent in nearly every direction.

The volume of exports to the United States, which was cut in half by the Dingley tariff, has—in 1902–3—fallen below the average of the past six years, and, with one exception, is the lowest yearly total since July, 1897.

The steady improvement of recent years in the methods and processes of American woolen mills has brought the domestic fabrics to a standard of quality and style which the English manufacturer frankly admits is nearly, if not quite, as good as his own. The hope has been that the trade lost in the United States would be made up elsewhere, but this anticipation has failed to realize.

The exports to the Continent and the colonies have also fallen short. Canada and Australia are beginning to develop their own woolen industries, and the surplus required over and above their own product has not been imported exclusively from England.

But the most serious menace to the British industry is the German invasion of the English markets. This has been growing of recent years and is now a serious factor in the situation.

Woolen cloths and clothing "made in Germany" are on sale in nearly every important town in the Kingdom, and the qualities, styles, and prices are such as to astonish English makers and tailors.

The situation is discouraging and it is not surprising that the leaders in the textile industries are seriously discussing the question of a change of national fiscal policy.

Another subject of special local interest, which has enlisted the attention of the woollen and worsted manufacturers of this district, is the so-called "two-loom" question. For indefinite years the rule in the Huddersfield mills has been one weaver one loom.

In the making of the high-class fancy fabrics (the specialty of Huddersfield), involving intricate designs and complicated machinery, it has been the judgment of masters and men alike that to insure the best results the entire time and skill of the weaver should be devoted to the working and supervision of a single loom, and that opinion has not changed as to the making of fabrics of that class. There are, however, in the district scores of mills and thousands of looms equipped for the manufacture of plain goods of all grades, in the making of which the designs are simple, the machinery less complicated and consequently less minute, and constant supervision is not required. Moreover, the use of self-regulating and automatic devices is steadily decreasing the labor of personal supervision. The manufacturers have, for some time past, been urging that in this class of work the weaver can, without risk of results or undue tax upon his energies, supervise two or three, or even more, looms, thereby saving waste of labor and at the same time lessening the cost of the fabric. To get them to do this the employers have offered advance of wages proportioned to the number of looms tended; but the weavers have all along been adverse to the proposed change. Even with the prospect of larger wages they have clung tenaciously to the old-time rule, "one man one loom."

Meanwhile, the plain-goods industry has drifted away to the mills of Bradford and other textile districts, where the weavers were more willing to meet the views of the masters, leaving idle thousands of looms in the Huddersfield district, since the owners could not compete with the two-loom and three-loom mills of other localities. Recently the subject has come up again for consideration.

The Huddersfield Chamber of Commerce has taken the matter in hand and has arranged conferences between the manufacturers and representatives of the weavers' trade unions with a view of some working agreement which may bring back to Huddersfield a lost industry. Negotiations and discussions are in progress; the result is looked for with great interest.

BENJAMIN F. STONE, *Consul*.

HUDDERSFIELD, ENGLAND, *October 6, 1903.*

NEW BRITISH STANDARD OF WEIGHTS.

(From United States Consul Boyle, Liverpool, England.)

The British Government has taken the first step toward the adoption of the decimal system of weights. It has just been announced by the Board of Trade that, under a special order in council, it will sanction the use of a weight of 50 pounds, instead of the present standards of 112 pounds (called a hundredweight) and 56 pounds (called a half hundredweight). The 50 pounds is by this action made a legal standard of weight. This reform has been adopted after forty years of agitation by Liverpool merchants and later on by petitions to the Government by the chambers of commerce throughout the country, and particularly by the chamber of commerce of this city. Liverpool has felt the necessity for the change more than any other city, as this is the leading entrepôt for American and colonial produce of bulk, the weighing of which is a considerable item in the handling and, indeed, in the ultimate cost of the shipments. More cotton, corn, provisions, and tobacco are imported into Liverpool than into any other city in the world, and by far the largest proportion of these imports come from the United States; so the United States is peculiarly interested in the reform just instituted. The Liverpool Journal of Commerce comments approvingly as follows:

All these great quantities are calculated by the American sellers in pounds avoirdupois, but by the British buyers they have had to be counted in hundredweights, quarters, and pounds, in accordance with our antiquated and absurd and anomalous system of weights. What is the consequence? To give a concrete example: The buyer wishes to ascertain, say, the weight of 100 pounds of tobacco; to do so the nearest weight he can employ is a quarter, or 56 pounds, to which must be added smaller weights until the exact quantity is ascertained. But two 50-pound weights will give him the exact amount at once; three will give him the weight of 150 pounds, four 200 pounds, and so on, smaller weights being used for fractions of 50 pounds. The consequence is an enormous simplification of calculation. It should be remembered that the men who weigh these materials at the docks are not, as a rule, mathematicians who can tell the time of day by algebra. They are largely day laborers, who have not had a superior education, and to weigh quantities with a set of weights necessitating the calculation of fractions of pounds, and thereby the use of dozens of small weights, necessitates a mental effort of which all are not capable, and the use of a multiplicity of weights which confuses them leads to errors and loss of time—and time is money. But by the adoption of a 50-pound weight a unit of calculation has been obtained which will sweep away a whole set of weights, prevent errors, and save confusion, time, and money. It should be remembered that the present complicated and wasteful method of calculating weights has to be gone through four times—first, when the goods are warehoused; second, by the customs, for the purpose of duty; third, in the counting-house; and fourth, in the factory—and in all these cases the same cumbrous system of

calculation by hundredweights, quarters, and pounds has to be gone through, and the loss of time, convenience, and money quadrupled. But by the adoption of a 50-pound weight, though four separate calculations will still be necessary, they can be done simply and quickly. The saving in bookkeeping will alone be great. The present system necessitates a maze of figures of different denominations; but by their reduction to the one common denominator of pounds weight whole columns of figures will be saved and the risk of mistakes minimized.

Americans have great difficulty in understanding the English system of weights—almost as much as they encounter in trying to understand the English fractional system of coinage. For instance, if you ask a man here how much he weighs he will tell you, say, “11 stone 7.” A “stone” is 14 pounds; so 11 stone would be 154 pounds, and adding the extra 7 pounds the weight given would be 161 pounds. Even Englishmen “to the manner born” have to make a mental calculation in arriving at the result in pounds in such a case. Sometimes provisions and other articles are sold at so much a stone, and then if the quantity purchased weighs a few odd pounds over a stone or a number of stones the purchaser and seller have to figure out the price per pound. It is the hope and expectation that the results from the adoption of the new standard weight of 50 pounds will be so satisfactory that before long the old-fashioned “hundredweight” of 112 pounds will be entirely abolished along with the stone, and that a decimal fractional system of 5 pounds, 10 pounds, and 25 pounds will come into general use.

JAMES BOYLE, *Consul*.

LIVERPOOL, ENGLAND, *November 13, 1903.*

AUTOMOBILES AND MOTOR BOATS.

(From United States Consul Halstead, Birmingham, England.)

Mr. S. F. Edge, a well-known racing automobilist and manufacturer of motor cars, in an address, which has been reported in the press, on the conditions and prospects of the British automobile industry, outlined an interesting project in the matter of motor boats. Foreign automobile manufacturers are now interesting themselves in fast gasoline-boat building—a scheme which the London Times report characterizes as matured, of a boat propelled through the water so fast and of a shape “so cleverly devised that instead of cutting through the water it will skim over it, thus reducing water friction to an absolute minimum.” Mr. Edge was confident in the belief that it will obtain a pace of 50 miles an hour, “but the astonishing pace of 35 miles an hour,” he assured his hearers, “may be regarded as a certainty.”

Mr. Edge asserts that Great Britain is the greatest market in the world for automobiles, of which, additionally to the extensive home manufacture, the importation last year numbered 3,500, valued at \$5,090,359, while for the first nine months of this year the importation has been 5,330 motor cars, valued at \$7,786,400. The raw material of motor cars being of inconsiderable value and the greater part of the price going in wages, the capture of this growing trade by British manufacturers he naturally thought most desirable. As an argument that the popular prejudice against racing is wrong, he stated that racing by evolution had tended toward the perfect car through the improvement of the parts, and offered as an example the fact that while his 1900 gear box weighed 340 pounds to transmit 24 horsepower, the 1903 box weighs only 183 pounds to transmit 80 horsepower. It has been the object lessons given in racing which have led manufacturers to produce each year better machines.

THE 1904 AUTO.

As an example of the keenness of manufacturers to effect improvements which racing had suggested, Mr. Edge dealt with the new 18-horsepower Napier which his firm is producing for 1904, and as he is the first manufacturer to give details of designs for the coming season, and as other British and continental designers, if not proceeding on parallel lines, are working to effect the same improvements, his descriptions, as follows, are interesting to American automobile manufacturers and customers, particularly as the Napier Company will soon build machines in the United States for the American market:

The 18-horsepower Napier for 1904* would be driven by a 6-cylinder engine. The chief features of the new car would be its absolute quietness at all speeds and its entire freedom from engine vibration or road shock. The good points of the engine were obtained mainly by perfect balancing and an automatic hydraulic regulator, combined with a variable lift to the inlet valves, while the comfort of the carriage would be due not only to the 9-foot wheel base, but to remarkably long springs, the ends of which slide in long, flat bearings, thus insuring great resiliency and at the same time lateral stability for turning corners. The frame, of course, would be a steel one, tapering at the ends. Among the special features might be mentioned the electric ignition. In this one coil only would be used and one brush, so that every cylinder would fire exactly at equal times after the one before it and before the one to follow it. The difference in running from perfect timing of this sort had only to be experienced once to be fully realized. Enough water would be carried above the cylinders to insure that stoppage of the pump would not result in damage to the engine, but only in more rapid evaporation of the

*In a subsequent report from Consul Halstead an extract is given from the Motor Car Journal of a communication from the agents of an American automobile manufacturer, wherein he asserts that everything "new and strange" which Mr. Edge announces as constituting special features for his outturn for 1904 have been for years—nearly all of them since 1895—the general or special features of American autos, and the agent satirically remarks that he is glad to see the leading British manufacturers, one by one, adopting them.

water. The pump would be positively driven and slow running. The clutch had been further simplified and no leather would be used in its construction, the surfaces in contact being metal. Very low pressure would take it in and out of action, even when adjusted to give gripping pressure for the fullest amount of power that could be transmitted. If, however, slip was desired, it could be adjusted in thirty seconds to provide it, or it might be oiled without the least harm. This would allow it to slip in traffic or on the level, but as soon as greater pressure was applied on a hill the oil was forced out and the clutch gripped as usual. The steering would be adjustable throughout, so that it would not matter how long the motor was in use; there never need be any back lash. So far as he knew, this point was not embodied in any other car made at the present time. Internal friction would be reduced to a minimum by the use of roller bearings and ball-thrust blocks wherever an advantage was to be gained by so doing. The flexibility of the engine is such that with a standard-gear car the top speed could be used almost continuously, and as this was the case direct drive was provided from the engine to the countershaft on the top speed. This meant that during the majority of its running there would be no wear whatever on its gear wheels; they remained idle in their box. The change gear was very light and strong, made to a special design of Mr. Napier's, which enabled very short shafts to be used. The control of the car was very pleasant; indeed it would be found as nice to drive as a docile voiturette, owing to its ability to crawl along with its engine not only running slowly, but also at a very low power. The aim had been to embody in the new car every feature which was considered an improvement.

Mr. Edge's speech is described as Utopian with regard to the possibilities of improvements of the roads, the supplying of electricity along the roads for electric cars, and the potentialities of automobilism in the way of relieving congested cities.

Recurring again to the Napier car, the Autocar considers the new hydraulic regulator as the principal point of interest, and although the title may suggest something of a complicated nature, this is, it says, far from being the case. When a motor is running slowly it requires a larger quantity of gasoline in relation to the amount of air drawn into the carburetter than is required when it is running fast. The faster the speed of the motor the more air is required, and vice versa. Similarly, when the engine is running fast, the water circulation, where the pump system is used, is much more rapid than when running at a slower speed. Consequently, the water pressure in the cooling varies with the speed of the motor. This is taken advantage of in the Napier regulator by casing the carburetter, providing a valve which is operated to open and close by a stem or valve spindle which abuts a diaphragm and by a pipe from the water circulation; water is always contained between the cap of the casing and the diaphragm. Upon the valve spindle is a spring which normally keeps the valve closed down toward its seat, thus reducing the quantity of hot air which is drawn in through the hot-air inlet. When the engine speed increases, and with it the pressure of the water, this pressure overcomes the resistance of the

spring, thus moving the valve spindle inward, and with it the valve, allowing the passage of more air to the cylinder mixture—a very simple and ingenious method of regulating the mixture.

One of the novelties of the season—I have no knowledge of the success of the article in actual use—is an arrangement of the steering pivots for the forward wheels of a car known as the Weller car, designed to resist the strain on the wheels when rounding corners. The manufacturer's explanation in a card in a motor paper is that the steering pivots are inclined forwardly as well as outwardly. The action of the steering wheels on a curve is complex, the effect on the two wheels not being the same. When rounding a curve to the right the outer or left steering wheel is brought up from the normal inclination of a wheel fixed to a regular form of pivot or axle when turning a curve to the vertical, but the inner wheel is still further inclined, thus throwing the weight of the vehicle inward upon its wheel base and putting, he believes, the wheels in the most advantageous position possible to withstand the stress produced by centrifugal force when rounding curves. The leaning action of the wheels toward the center of the curves is proportional to the radius of the steering circle and the object of the outward inclination of the pivots is to obviate the risk of strain on the steering gear when overriding obstacles.

PROTEST AGAINST FREQUENT CHANGES IN AUTOS.

Mr. Edge, the automobilist and manufacturer, is naturally enthusiastic in regard to improvements in cars, but an amateur automobilist who was interviewed by the Birmingham Daily Mail makes some points against manufacturers' frequent changes, which are of interest. He believes motor enthusiasts are fashion smitten and follow too closely every whim of the manufacturer, that the changes are not always advancing toward mechanical perfection, and that "fashions and change in construction of the motor cars and vehicles are coming faster than improvements and are costing the public much more than they are aware of." He calls attention to the motor tricycle which four years ago was looked upon as the light motor vehicle—English-made tricycles having scarcely reached the market—and which could be purchased in France for \$350 or \$400, but on which, though in good condition, one would with difficulty realize \$75 to \$100 to-day. Quite recently the light car and motor bicycle took the place of the tricycle. One of several combinations made with the aid of the motor cycle to meet the motoring public midway between the motor cycle and the light car was the motor bicycle and fore carriage, the latter a two-wheeled arrangement with a comfortable seat for one person placed in the front part of the motor bicycle,

as a substitute for the single front wheel. Another combination was the motor cycle and trailer. Both arrangements are lacking from a social point of view, though the fore carriage is a self-contained vehicle and has many other advantages over the motor bicycle and trailer. The side carriage with a motor bicycle permitting riders sitting abreast has not been found a thoroughly practicable machine.

Fashion, however, plays its greatest part in motor cars, and this amateur's views on the changes in these vehicles are given in the Daily Mail in the following words:

Until recent years engines were usually placed in the rear part of the vehicle; to-day that type of vehicle is nearing extinction. The engines at the present time are placed in the front under a sheet-iron bonnet, the position of which was previously occupied by a seat. This change has revolutionized the general design of the motor car. As there were great numbers of these machines with the engine at the rear made and imported into this country, it follows that there are many still in existence. The amateur motorist pointed to the advertisement columns in leading motor journals to bear out his statements. Out of curiosity, he said, a short time ago he counted the advertisements in one journal of motor cars for sale. There were 240 advertisements representing 300 cars, 250 of which were second-hand and about 100 were obsolete in the eyes of the average motorist. By the word obsolete he meant that the engines were at the back of the car; they were not of more than $3\frac{1}{2}$ horsepower; they had unequal wheels, and the wheel base was short. Many of these obsolete cars had cost from £250 (\$1,216.63) to £300 (\$1,460) and through the change of construction and fashion had depreciated to about 30 or 35 per cent of their original cost; indeed, in some cases 20 per cent was about all they would realize. This depreciation had come about in respect of these particular cars during the past three or four years. The wear and tear of tires, machinery, and general deterioration of the car in the ordinary way was not enough to explain the drop in value, for depreciation of this kind could in a great measure be controlled by the motorist himself. But depreciation through fashion and evolution in the construction was, of course, out of his hands.

"For instance, a leading firm of German motor-car manufacturers about eighteen months ago introduced a new form of radiator—that is to say, a new means of keeping the water which cools the engine at a normal temperature. This modification in the water-cooling system has wrought a radical change in the outline of the forepart of the car, and as the firm has been most successful in recent racing competitions, a large proportion of the manufacturers are following their example like sheep through a gap, with the result that the tendency is to cause even a machine which actually had its engine in front to become obsolete." Proceeding, the amateur motorist, who, by the way, has some experience in mechanical engineering, criticised the new radiator. The outline given to the car by this particular system was anything but neat and symmetrical to a mechanical eye, and the value of the system itself for machines other than racers was questionable, without taking into consideration its additional cost. It was well known, he contended, that from season to season the manufacturers had produced a new pattern of machine with scarcely any vital or necessary alteration. "This juggling about of patterns with a view to producing obsolescence in machines which are otherwise modern," said our informant, in conclusion, "was played pretty extensively by the cycle maker, and it remains to a great extent within the power of the public to

decide how far they allow the motor manufacturer to repeat the same game. Patterns will change of course, from time to time, as the outcome of progress, but we ought to be protected against changes to such a degree as to make, say, £300 or £400 (\$1,460 or \$1,947) spent on a car this year depreciate £100 (\$486.50), or £2 (\$9.73) a week, in twelve months, purely owing to fashion."

The contention of the Birmingham Daily Mail's amateur automobilist in regard to the placing of engines forward is supported by an engineer who has a card in this week's issue of the Autocar, and who says he believes the success of the typical light American car is largely due to the central position of both motor and seat between the wheels instead of the motor being perched over one set and the seat over the other, as in standard English light-car practice.

"How is it," he asks, "that the often ugly bonnet is so popular? Why do the majority of makers place the motor on the front of the car? I can only see one good reason, and that is accessibility. Certainly it is very handy to be able by lifting the bonnet to have the top, sides, and front all get-at-able, though in many cases the front is blocked by the radiator."

This engineer concludes his communication as follows:

But accessibility is by no means inseparable from the bonnet. In well-designed cars the engine may be placed toward the center and be very easy of access—in some respects, handier than if at the front. There is much more against the forward placing of engines than may at first appear—at least there are three grave drawbacks. First, the heavy weight of the motor is thrown chiefly upon the steering wheels, where it is to some extent a disadvantage instead of a gain, as it would be on the driving wheels. To mitigate this the body is dumped almost right over the rear axle, but the average car runs most of its time only partially loaded; also it is less comfortable to be seated over one pair of wheels than between the set. Second, the engine receives more road vibration than if situated toward the middle. Third, a motor can be placed to occupy less space, as regards seating capacity in relation to length of car, when situated centrally. Especially is this so in cars of large seating capacity.

However, there are many excellent cars not having the engine stuck right on the front, such as the Hermes, Lanchester, James, and Browne, in a lesser degree the Wolseley, and numerous American cars.

It is somewhat amusing on raising an impressive looking bonnet, apparently concealing at least 16 horsepower, to find a wee 6-horsepower engine nestling down among the usual array of pipes and other components. But perhaps to an engineer it is more sad than funny.

MARSHAL HALSTEAD, *Consul*

BIRMINGHAM, ENGLAND, *October 29, 1903.*

TRAINING CUSTOMS OFFICERS.

According to *Handel und Gewerbe*, the *Post*, and other German trade papers, an effort is to be made to secure scientifically trained customs officers. Commenting on the matter, the *Post* said in a recent issue :

The tariff of 1879 often caused merchants and manufacturers to note the need of the better training and equipment of customs officials. The conditions under the new tariff, with its wide-reaching differentiations, will be even more difficult. The customs officers have to answer a very great many technical problems now, but under the new law they will have many more, hence opportunity should be offered to officials to qualify themselves technically and to acquire such exact knowledge as will be of value in their work, for in future the customs official will want more than a mere expert knowledge of wares or classes of wares; he will be expected to know something about chemistry, physics, and mechanics. Customs officials should be men who have taken courses in the elements of finance at least and in the branches of political economy that touch trade, particularly in commercial geography. In order to train the higher officials a large laboratory and a large lecture hall should be connected with the principal customs office in Berlin.

Naturally, the courses in this kind of a technical school for customs officers will have to cover a long period of time. They should consist not only of lectures from customs officials, chemists, etc., but also from specialists, teachers of the Berlin University and the Imperial Institute. By this method a sufficiently technical and certainly a more satisfactory training is sure to result than has obtained hitherto. The officials will do better work and the business world will be benefited.

TARIFF AND PORT CHARGES IN HONDURAS.

(From United States Consul Moc, Tegucigalpa, Honduras.)

TARIFF. .

Duties are levied by the half kilogram (1.1 pounds) on the gross weight of merchandise. It therefore behooves our exporters to pack their goods as carefully, securely, and strongly as possible, to avoid heavy duties on their importations to this country and the consequent prohibitive selling prices which greatly affect the sale of our merchandise. Take silk for example: The duty is 3 pesos (\$1.15) per pound. If the wrapping weighs another pound the duty levied will be 6 pesos (\$2.30) in all. Goods should be packed not only to minimize the wrapper weight, but also to withstand the cutting and crushing force of the lasso which binds the cargo on the pack saddle.

The tariff has been amended by two decrees: The first permitting each pharmacist to enter 30 gallons of alcohol (duty, 2 pesos per

half kilogram=73.6 cents per 1.1 pounds) as medicine (duty, 50 centavos per half kilogram=19.2 cents per 1.1 pounds), and to be used as such, and chemically pure; the second, lowering the duty $66\frac{2}{3}$ per cent on candles of stearin, wax, and tallow.

This latter amendment, removing in part the duties on candles, is interesting in view of the fact that two days before Congress had granted a candle-making monopoly to Mr. Christmas, an American.

PORT CHARGES.

On every package or bale of merchandise unloaded at a port of entry in Honduras there must be paid certain fixed port charges, in addition to the customs duties and the commission merchant's fees.

Description.	Charges.	
	Pesos.*	Cents.
Charges at Amapala on goods imported:		
Manifest in detail.....	0.75	28.8
Poliza, or customs permit of entry.....	1.50	57.6
Transfer fee, custom-house.....	.50	19.2
Sanitary fee on goods to interior.....	.10	3.8
Sanitary fee on goods to the port.....	.15	5.7
Municipal duties or imposts on goods destined for the port only:		
Cotton goods, etc.....per 100 pounds...	1.00	38.4
General merchandise.....do.....	.50	19.2
Flour.....do.....	.15	5.7
On exports (shipping permit from custom-house).....	.75	28.8

* Silver.

In order to give an idea of the expense attendant on the entry of merchandise at the ports in Honduras and the shipment thereof to Tegucigalpa, the introduction of a "lot" of 125 pounds of flour at the port of Amapala is illustrated below:

Description.	Cost.	
	Pesos.	
Agent's fees, including all port charges.....	4.00	\$1.536
Duty.....	2.50	.96
Depot fee, San Lorenzo.....	.25	.096
Freight to Tegucigalpa.....	2.50	.96
Municipal imposts, Tegucigalpa.....	2.50	.96
Total.....	11.75	4.51

ALFRED K. MOE, *Consul.*

TEGUCIGALPA, HONDURAS, *October 14, 1903.*

PENDING COMMERCIAL TREATIES OF GERMANY.

(From United States Consul Muench, Plauen, Germany.)

Germany enters upon new treaties with practically the entire civilized world hampered by limitations in the nature of minimum rates imposed by the late session of the National Legislature (Reichstag and Bundesrath), and while such rates are not conclusive as far as the Ministry is concerned, yet any treaty negotiated must be again submitted to the same legislature to be either ratified or rejected as a whole. The late elections for members of the Reichstag having resulted in no material change in the complexion of the parties that favor high and prohibitive tariff duties, it seems doubtful that any material lowering of the minimum rates will be attempted, for fear of an entire rejection. These negotiations may continue several years before final results are reached. In the meantime business in Germany must of necessity be done upon the "hand-to-mouth" principle, and there will be no establishment of enterprises the ultimate outcome of which in anywise depend upon the tariff.

Nor is the United States disinterested in the contemplation of these new tariff plans. It has been sufficiently pointed out heretofore that with regard to some of our most important items of export to this country, such as meats, breadstuffs, machinery, etc., the indicated rates of the new tariff will work a practical prohibition, as those rates place our food products beyond the reach of the middle and lower classes of Germany, at least until the German workingmen shall have secured wages more nearly on a level with those of their American brethren.

HUGO MUENCH, *Consul.*

PLAUEN, GERMANY, *October 12, 1903.*

NEW GERMAN TARIFF SCHEDULES.

Stahl und Eisen, a leading German trade publication, in its issue of October 1, 1903, comments on the new German tariff as follows:

The new tariff law has not yet gone into effect and it will not go into operation until the new commercial treaties are concluded. Whether this will occur remains to be seen. It is to be hoped that during next year it will be possible to renew commercial relations with the states with which Germany has long been connected. Considering the form of the new tariff law as it passed the Bundesrath and Reichstag, it will be hard to secure the connections and concessions desired. Considerable work is necessary on the part of the authorities upon whom the execution of the new tariff devolves, and it will have to be carefully reviewed in order that it

shall not contravene the intention of the lawmakers. It is probable that the Bundesrath will take some action next winter affecting the working of the new tariff; but it will not be settled easily, and there will remain much preparatory work to be done before it can be put into execution or before any opinion of its workings can be formed. The schedules of the tariff are now to be considered. They will be formed on the basis of the tariff law. The authorities have been busy preparing them for some time. When completed, the list will be referred to the imperial treasury and also to interested circles before it goes to the Bundesrath.

The schedules have in view the classification of wares in such a manner as will cause them to be readily recognized and understood, and it has been suggested that a central bureau be created, with executive and judicial functions, for deciding questions arising from the operation of the tariff law, since it has been recognized by the Government that it is necessary to keep up the rapid changes of the official schedules due to technical and commercial innovations. In fact, these changes have been so rapid that the schedules have been almost entirely changed since 1896.

The official schedules respond to the needs of commercial life. It is clear that the arrangement of the schedules in the new tariff, so far as it corresponds with that of the old tariff, should remain the same. A difficulty that will be avoided in the new tariff will be the diminution of references, under certain headings, to other parts of the tariff, where the part of the tariff is not clearly indicated. The new tariff contains a large number of material changes. It is not only more specialized, but has incorporated the most diverse taxes. Many changes will be made in the classification in regard to grouping wares. Goods that were formerly under separate heads are placed together, and wares are included that were not mentioned in the former tariff.

A point of interest to industry is the provision in the new tariff relative to the decreased tariff on certain raw materials which have been partially manufactured.

The suggestion has been offered that customs officials should be specially trained and that a bureau should be created for this purpose, but this is a difficult matter since, for the securing of results, the customs officials should be versed in the most varied lines. The Government, however, should found such an institution, where the officials could be instructed until the tariff goes into effect.

The second important work, already begun by the proper authorities, is that of preparing the statistical schedules. These will serve to give information on imports and exports, the chief purpose of the statistical schedules being to group the different articles in such a manner as to interest persons in practical life. The old tariff contained twenty-four schedules, while the statistical schedules as now planned contain hundreds. If one observes the monthly proofs of the bureau of statistics on imports and exports he will find many headings in which the figures are unimportant; they could easily be omitted, and there would arise no danger of a misconception of the relations of customs and commercial politics. Formerly there has been hardly any distinction in headings according to imports and exports, but attention should be given to this phase of the subject in the preparation of the new statistical tables. There are certain articles which are specially important in the figures of exports and imports, and these should be brought together under special headings.

It is evident that the preparation of these two schedules, which have only reached a preliminary stage, will require some time. The Bundesrath has the final decision, and it is believed that this decision will take place early next year. It is expected that the first draft of the official tariff schedules will be finished in a short time, and that it will be presented to the interested circles for their opinion at the beginning of the year.

MODIFICATION OF CUBAN TAX LAWS.

(From United States Minister Squiers, Habana, Cuba.)

In continuation of my dispatch No. 697 of October 20, I have the honor to forward herewith translations of two presidential decrees—No. 158 of October 22 and No. 170 of November 2—modifying certain articles of the original regulation.

Decree No. 158 makes the following modifications of the regulation:

1. A correction of article 46, referring to the tax on sugar, by striking out the words "for consumption."

2. A fine of \$100 to \$500 per package when packages contain more or a greater number of taxed articles than prescribed by the regulation. This fine takes the place of a fine of \$10 to \$100 on each taxable unit.

3. New article 99 releases manufacturers and wholesale dealers from attaching stamps to all their taxable articles in stock within a period of sixty days and requires the stamps to be attached only as they are sold. This modification does not extend to retail dealers, who must attach stamps to all their taxable articles within sixty days from November 1.

Decree No. 170 extended for ten days and no more the period of time granted in which to present sworn declarations of goods on hand, thus giving the rebellious manufacturers and dealers a last chance to comply with the regulation. This chance has been taken advantage of, as it became apparent that every dealer was to be held to account for noncompliance and that there was no getting around payment of the taxes.

The strongest and possibly the most just complaint against the original declaration was that manufacturers and dealers should not be compelled to stamp all stock on hand, but only as it is sold. The Government recognized the justness of this argument, as is proven by the modification of article 99, decree No. 158.

Decree No. 170 also fixes a penalty of \$300 for nonpresentation of the sworn declarations, and a fine of \$200 for violation of article 17 of the regulation, which says that cigarettes must be put up in packages of sixteen each.

There have been some arrests and convictions for violation of the regulation, but they have all been minor cases of no importance. With the exception of one case—that of the tobacco trust—all complaints of violation have been followed by conviction and fines. The

tobacco trust inadvertently sold some packages of cigarettes containing eighteen each, but the judge declared, after hearing the evidence, that there was no intent to defraud.

H. G. SQUIERS, *Minister*.

HABANA, CUBA, *November 17, 1903.*

[Decree No. 158.]

DEPARTMENT OF THE TREASURY.

In virtue of the powers conferred upon me by the constitution, and in conformity with article 8 of the law of February 27, 1903, on the recommendation of the Secretary of the Treasury I have issued the following decree:

Articles 46, 83, and 99 of the regulation for the collection of the taxes created by the said law for the payment of interests on and redemption of the loan of \$35,000,000 are modified and shall read as follows:

ARTICLE 46. Stamps for sugar shall be attached to each bag or other package.

ART. 83. When articles are in packages of greater capacity than that expressed in the foregoing provisions a fine of from \$100 to \$500 shall be imposed for each package and not for each taxable unit.

ART. 99. All taxed articles on hand are subject, in the act of their sale, to taxes of the amount the law determines and in conformity with this regulation. Every wholesale dealer or manufacturer who shall have in his possession articles subject to the tax shall present to the administrator of rents and taxes of the respective fiscal zone a duplicate sworn statement of such goods as he may have on hand November 1, 1903, requesting from the said administrator of rents and taxes the printed form which shall be given him for the purpose. One of said sworn statements shall be returned to the interested party with the record of presentation signed by the administrator of rents, and on the back of said statement the manufacturer or dealer shall note the stamps he purchases for payment of taxes on such goods as he has on hand, which goods on being declared must be classified as "imported" or "manufactured," this without prejudice to manufacturers also noting in the book required by article 62 the stamps acquired. Special stamps Nos. 15 or 17, according to whether the goods are "imported" or "manufactured," and with the stamp "implantación," shall be attached to these goods.

A period of sixty days from November 1 is granted retail dealers in which to attach proper stamps to goods they have not sold.

HABANA, *October 22, 1903.*

T. ESTRADA PALMA.

JOSÉ M. GARCIA MONTES,
Secretary of the Treasury.

[Decree No. 170.]

DEPARTMENT OF THE TREASURY.

In virtue of the powers conferred on me and on the recommendation of the Secretary of the Treasury, I order the following:

1. As a consequence of the modification of article 99 of the regulation for the collection of taxes created by the law of February 27, 1903, a nonextendible period of ten days, beginning with the date on which this decree is published, is granted for manufacturers and warehousemen (almacenistas) who had not presented their

declarations on the 1st instant to do so in the offices of administrators of rents and taxes of the fiscal zones.

2. Three hundred dollars is fixed as the penalty which will be imposed on manufacturers or warehousemen who do not present their declarations as provided in said article 99, modified, of the regulation.

3. Two hundred dollars is fixed as the fine which will be imposed on manufacturers of cigarettes for violation of article 17 of the regulation.

The Secretary of the Treasury is charged with enforcing the foregoing.

HABANA, November 2, 1903.

T. ESTRADA PALMA.

JOSÉ M. GARCIA MONTES,
Secretary of the Treasury.

CUSTOMS TAX AND OCTROI IN THE CANARY ISLANDS.

(From United States Consul Berliner, Teneriffe, Canary Islands.)

CUSTOMS TAX.

The Canary Islands are known as puerto francos (free ports), but the government levies a customs tax for revenue on the following articles:

Article.	Unit.	Tax collected.	
		Pesetas.	
Alcohol.....	100 quarts....	95.00	\$18.34
Liquors, brandies, etc.....	.....do	150.00	28.95
Rum and gin.....	.....do	100.00	19.30
Sugar.....	220 pounds...	70.00	13.51
Salt fish.....	.....do	24.00	4.63
Cocoa .....	.....do	80.00	15.44
Shipped direct from Fernando Po.....	.....do	60.00	11.58
Manufactured.....	.....do	200.00	38.60
Coffee.....	.....do	107.00	20.65
Shipped direct from Fernando Po.....	.....do	80.00	15.44
Roasted .....	.....do	250.00	48.25
Chocolate	2.2 pounds...	1.00	.193
Honey and molasses having over 50 per cent sugar.....	220 pounds...	80.00	15.44
Honey and molasses less than 50 per cent sugar.....	.....do	40.00	7.72
Pepper and spices.....	.....do	100.00	19.30
Tea and imitations thereof.....	.....do	150.00	28.95
Tobacco, leaf:			
Habana, Sumatra, and Brazil.....	2.2 pounds...	1.08	.21
Philippine and Java.....	.....do .....	.82	.16
Virginia and other.....	.....do .....	.64	.105
Manufactured—			
Habana .....	.....do	2.17	.42
Philippine .....	.....do	1.63	.315
Mixed .....	.....do	1.36	.26
Virginia .....	.....do	1.08	.21
Rape .....	.....do	1.08	.21
Verdin .....	.....do .....	.82	.16

The collection of these duties is farmed out to a syndicate for 1,002,000 pesetas (\$190,380) per year.

OCTROI.

Besides these duties the different ayntamientos (municipalities) of the islands collect an octroi tax on every necessity used in living, as shown by the following:

Article.	Unit.	Octroi collected.	
		Pesetas.	
Meats:			
Fresh	220 pounds...	18.90	\$3.65
Salted or smoked.....	.....do	21.00	4.05
Pork, lard, and butter.....	.....do	21.00	4.05
Pork, salted.....	.....do	31.50	6.08
Brandy, every degree.....	Quart	1.15	.222
Liquors.....	.....do	84.00	16.21
Grease	2.2 pounds...	6.30	1.21
Flour.....	.....do	2.52	.49
Oils, petroleum, etc.....	.....do	21.00	4.05
Wine	Quart	11.25	2.17
Beer and cider.....	.....do	2.10	.405
Vinegar .....	.....do	2.94	.57
Rice and pease and flour thereof.....	2.2 pounds...	2.35	.45
Wheat and flour thereof.....	.....do	2.10	.405
Corn and flour thereof.....	.....do .....	.63	.12
All other cereals and vegetables, dried, and flour thereof.....	.....do .....	.42	.08
Fish, salted or fresh.....	.....do	8.40	1.52
Soap, soft or hard.....	.....do	14.70	2.85
Charcoal .....	.....do .....	.53	.10
Coke .....	.....do .....	.21	.04
Canned fruits.....	.....do	16.80	3.24
Canned vegetables.....	.....do	12.60	2.44
Salt .....	.....do	19.80	3.81
Pigeons, squabs, and other birds.....	Each .....	.084	.017
Turkeys.....	.....do .....	.84	.16
Capons.....	.....do .....	.42	.08
Pheasants .....	.....do .....	.966	.19
Poultry.....	.....do .....	.21	.04
Geese, ducks, and rabbits.....	.....do .....	.21	.04
Poultry or birds, cooked.....	.....do .....	.966	.19
Canned articles of before-mentioned birds.....	2.2 pounds...	.42	.08
Ice, natural or artificial.....	220 pounds...	4.54	.87
Candles:			
Made of grease.....	.....do	37.59	7.24
Made of wax or paraffin.....	.....do	32.97	6.36
Eggs	100.....	.42	.08
Cheese	220 pounds...	9.16	1.76
Butter, fresh or cream, or salted.....	.....do	8.61	1.66
Straw and hay.....	.....do .....	.21	.04
Kindling wood.....	.....do .....	.42	.08
Milk.....	.....do	4.83	.93
Coal.....	Ton	2.00	.39

In these tables the peseta is figured at 19.3 cents, the official valuation, although the actual value of a peseta at to-day's rate of exchange is about 15 cents.

SOLOMON BERLINER, *Consul.*

TENERIFFE, CANARY ISLANDS, *October 6, 1903.*

COTTON CRISIS IN EUROPE.

The following is a translation made in the Bureau of Statistics, Department of Commerce and Labor, from *España Economista y Financiera* of September 20, 1903:

In one of our late issues we studied the conditions of cotton production and the rise in price which this article has had in the principal markets. The subject being of particular importance for our industry, we continue the study.

In the cotton industry there is a crisis such as has not been experienced in Lancashire since the civil war in America. Last January, medium mixed American cotton was quoted in Liverpool at 4.74d. (9.48 cents) per pound. At the end of March the price went to 5.34d. (10.68 cents), and by the middle of June it had increased to 7.24d. (14.4 cents). Granted that the supply is not equal to the demand and that later the looms will be compelled to stop, as long as there are violent fluctuations the cotton industry of Lancashire will be almost paralyzed. The new crop has been delayed fifteen days. The consumption of American cotton is increasing daily. The crop last year amounted to about 10,700,000 bales; this year the crop will probably amount to 11,200,000 bales, while 12,000,000 bales will be consumed, thus depleting the supply by drawing on reserves.

The general syndicate of the French cotton industry has just published a disquieting note explaining the causes of the threatening crisis. It says:

"America, the principal cotton-producing country, has not given in past years crops to correspond with the increase of land under cultivation. Is this the result of the exhaustion of the soil brought about by a continual growing of this crop or by unfair dealing? It is not easy to decide. During this same period the use of cotton has increased daily; the lack of a sufficient supply has caused the cotton industry to feel some apprehension as to how it is to exist till the new crop arrives. The disquieting reports of persons in authority do not improve the situation. What will be the effect of the crisis? Without doubt, in France many establishments will be compelled to close their doors. Even now the looms in Normandy have to reduce their output, and this will become general unless the manufacturers keep in touch with the movement of the raw material. In this case, a period of high prices in all that relates to cotton may be expected. As the manufacturers and consumers are powerless to provide a remedy for this state of affairs, and as it is impossible to overcome the obstacle of a crop failure, the economical effects are exceedingly severe."

EUROPEAN TRADE NOTES.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

Odessa-New York steam communication.—Next month a Russian line of steamships is to open a new traffic route between Odessa (via Naples and Marseilles) and New York. Considering the great number of emigrants which go from Russia and Italy to the United States, this new enterprise has excellent chances for success.

Italian-oriental trade.—Accounts from Milan state that a new Italian steamship line to run to China will receive an annual subvention of \$193,000 from the Italian Government. The Italians,

who have been very successful as merchants in levantine and African combines, are now directing their efforts upon Asiatic countries, China especially.

German technical schools.—Germany has 75 technical schools, of which 27 are in Prussia and 7 in Saxony; the balance are distributed among the twenty-odd other States of the German confederation.

German-Russian Association.—The German-Russian Association at Berlin, whose mission is to increase German exports to Russia, has 257 German business and manufacturing firms and 42 German chambers of commerce among its membership.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *October 23, 1903.*

INDUSTRIAL AND TRADE STATISTICS.

(From United States Consul Warner, Leipzig, Germany.)

Russian industrial handbook.—The Imperial Russian Ministry of Finance is about to publish a handbook of the commercial and manufacturing establishments of Russia. The work will contain the names and addresses of about 16,000 firms, as well as detailed information as to the condition, size, and location of each. The book, which will have some 800 pages, will be sold for 5 rubles (\$2.58) a copy.

Petroleum transportation in Roumania.—It is reported that the Roumanian Government proposes to monopolize the petroleum transportation facilities of that country by purchasing the tank cars of the private companies and building other new ones on its own account. This action is contemplated in order to make it more difficult for oil refineries to continue such speculations as they have practiced.

New potash mine in Germany.—The Deutschen Solvay Werken Aktiengesellschaft have recently purchased a tract of land in the Micheln section of the Calbe district, Province of Saxony, where it is proposed to sink a shaft in order to mine the potash deposits which the land contains in large quantities. The company, which has a capital of 10,000,000 marks (\$2,380,000), has already two shafts in operation in the neighborhood of this new one, the work upon which is to be commenced immediately.

Regulating the exports of Baku crude petroleum.—Those interested in the petroleum industry of Baku have petitioned the Imperial Russian Government to permit them to hold a congress at St. Petersburg, either during the present month or at the beginning of November. The meeting is especially desired in order that a definite

understanding may be arrived at between the oil-well owners regarding the exports of crude petroleum to foreign countries.

Krupp investment in mineral lands.—It is reported that the Krupp Works of Essen, the greatest iron and steel works in Germany, are now negotiating with the Rodingen blast furnaces for the purchase of 1,000 acres of mineral lands in the Grand Duchy of Luxemburg.

New telegraph line in Russia.—The Warsaw district of the Imperial Russian Post and Telegraph Department has just begun work on a telegraph line to run from the city of Lodz to the Kolo district, a distance of about 50 miles. This new line is being built in order to handle the telegraphic communications between western Russia and the Province of Posen, Germany.

Hail insurance in Bavaria.—In consequence of the severe losses which have already been sustained in upper and lower Bavarian mountain districts, some of the German hail-insurance companies, such as the Norddeutsche Hagelversicherungs Gesellschaft and the Borussia Hagelversicherungs Gesellschaft, have decided to write less policies in those sections. The former company has refused to renew 20,000,000 marks' (\$4,760,000) worth of insurance and the latter has informed applicants that the Bavarian climatic conditions are too unfavorable to place any more hail insurance there.

Metric system for Great Britain.—At the annual meeting of the British Paper Manufacturers' Society, which will be held at London, October 28, 1903, an effort will be made to pass a resolution requiring the members of the society to immediately adopt the metric system of weights and measures. Furthermore, it is proposed to have the society join the Decimal Association, in order to do more effective work in helping to introduce the metric system into the British Empire.

New electric railroad in Switzerland.—Two Zurich engineers, Messrs. Grote and Westermann, have applied for a concession to build an electric railroad in the Bernina Pass, Canton of Graubünden. This new road will run from St. Moritz to Pontresina, thence over the Bernina Pass via Poschiavinatal, to Tirano, where it will connect with the Veltlin electric road, a branch of the Adriatic Railroad Company. The new road will have a length of about 40 miles.

Bids for Westinghouse brakes.—German railway-supply manufacturers have been notified that the Royal Belgian Railways want bids upon Westinghouse air brakes, parts thereof, and other supplies, for which contracts will be awarded in the near future by the Ministry of Railways, at Brussels.

Italian beet-sugar syndicate.—That Italy has made rapid progress in the production of beet sugar is perhaps well known. More sugar is

now produced therein than is required to supply the home market. Last month representatives of thirty-three Italian beet-sugar factories met in conference at Bologna to perfect plans for the formation of a syndicate that is to regulate the production and sale of beet sugar in Italy.

BRAINARD H. WARNER, Jr.,
LEIPZIG, GERMANY, *October 22, 1903.* *Consul.*

COMMERCIAL AND INDUSTRIAL NOTES.

(From United States Consul Warner, Leipzig, Germany.)

Trans-Siberian Railroad.—German steel manufacturers have just been informed, by telegraph from St. Petersburg, that the Russian Government intends to equip the Trans-Siberian Railroad with a double track. If this report is true, Russia will have to place large orders for steel rails.

Women employees on Russian railroads.—The Imperial Russian Minister of Railroads has recently given an order authorizing women to be employed as station agents of the State railroads. The trials which have been given women applicants at some of the smaller stations on different branch roads since the order was issued are said to have been very satisfactory.

High-speed electric railways.—A commission, composed of expert engineers, sent by the Belgian Government to make an investigation of the speed tests which were made on the railroad between Marienfelde and Zossen, recently returned to Brussels, and it is said their report was very satisfactory. In consequence thereof, certain modifications will be made in the specifications of the projected high-speed road between Antwerp and Brussels. The project to connect these two cities by a high-speed electric road is not a new one, but since the trial-speed trips in Germany it has gained new life. It is estimated that the cost of construction of the Antwerp-Brussels road would amount to about 11,000,000 francs (\$2,123,000). The Berlin electric firm of Siemens & Halske, it is said, is now negotiating with Cockerill & Co. and M. Empain, the Belgian financier, regarding the construction of this road.

Electric railways in Italy.—The Brioschi, Finzi, Gadda, Olivetti, and Edison electric companies, of Milan, Italy, as well as others, are about to organize a new company, with a capital of 8,000,000 lire (\$1,544,000), for the purpose of exploiting the monophasic electric railway system, which was invented by Dr. Giorgio Finzi, of Milan.

Italian wheat crop.—According to the official report of the Royal Italian Ministry of Agriculture, just published, the wheat crop of

that country for 1903 is 65,000,000 hectoliters (184,470,000 bushels), 17,000,000 hectoliters (48,246,000 bushels) more than in 1902 and 7,000,000 hectoliters (19,866,000 bushels) in excess of the annual average yield.

German library for Harvard.—Harvard University has succeeded in buying the library of the late Geheimrat Karl Mauer, of Munich. The library contains a magnificent collection of scientific books. Especially valuable is the part thereof which relates to the early history of Scandinavia.

Freight reduction on German railroads.—The advisory board of the Prussian State railroads has just recommended that the freight rates on mineral salts shipped to Belgium and also those sent from Federn and Volpriehausen, in the Province of Hanover, to South and West Germany be reduced. The principal German salt deposits are located in the Provinces of Saxony and Hanover.

German machines for Japan.—A Leipzig firm recently received large orders from Japan for the construction of hoisting machines—derricks, cranes, etc. It proposes to start to work upon these contracts as soon as it can send workmen to Japan. Next week a number of engineers and master mechanics in its employ will sail for Japan under a three-year contract.

Blast furnaces in Chile.—It is reported that the establishment Creusot, of Paris, intends to build blast furnaces in Chile in order to develop the iron-ore deposits in the northern part of that country. A syndicate has been formed to organize a stock company, with a capital of 17,500,000 francs (\$3,387,500), which will be in a position to undertake some of the iron contracts for which the Chilean Government is now asking bids.

Firearms manufacture in Austria.—A leading Austrian firearms-manufacturing company of Vienna has just received orders from two foreign countries for a large supply of firearms, and consequently will do a much better business this year than it has for some years past.

Austrian jute trust.—The Union Jute Company, of Vienna, has just been organized, with a capital of 2,000,000 crowns (\$406,000), which is to be increased to 4,000,000 crowns (\$812,000) in order to buy up the Austrian jute factories and thus form a jute trust.

Russian beet sugar for Japan.—The first direct shipment of Russian beet sugar will be forwarded to Yokohama and Kobé within the next few days. The shipment is being made by the firm of Jacobi & Co., Danzig, Germany, and will consist of 5,600 metric tons.

Packing goods for Finland.—German and Swedish merchants exporting to Finland have been requested by their customers to take

greater care in packing goods for that country—not even to use old newspapers in connection therewith, as all printed matter is subject to rigid examination. Finland's foreign trade is mostly in the hands of Russians and Germans. The chief imports are cereals, coffee, sugar, iron and ironware, cotton and cotton goods, tobacco, colors, and oils. The small quantity of American products which reach Finland are usually shipped via some German or English port, and in foreign bottoms.

Depression in the German iron trade.—An indication that the present conditions of the iron market are not all that could be desired is obtained from the fact that a firm at Essen, on Monday, November 2, 1903, laid off two shifts of hands at its mills.

New coal beds in Germany.—The local mining bureau of the Duchy of Saxe-Gotha has issued a permit to mine semibituminous coal in the districts of Heldritt, Hohenstein, and Rodach, where it is believed coal veins exist of considerable commercial value. There are, as a matter of fact, large coal tracts to the north of those districts, where, however, the rock formations are perhaps more regular.

Austria seeking Roumania's iron trade.—The Tetschen Iron Works, located at Tetschen, Bohemia, on the Elbe River, which belongs to the Austro-Hungarian cartel, or trust, is now making strenuous efforts, through a Berlin house, to gain a foothold in Roumania; consequently, its prices have been subject to considerable reductions, the other Austrian works following this example. There is nothing in the cartel's regulations which prevents members from underbidding each other in foreign markets. German iron works have also been taking part in the Roumanian iron war, as the latter country has been a market for large quantities of German iron.

New Swiss tunnel.—The Swiss Ministry of Posts and Railroads has just awarded a syndicate—composed of a Swiss and two French firms, one from Marseilles and the other from Paris—the contract for the building of the Ricken Tunnel. The contract price is 9,000,000 francs (\$1,737,000).

Russian-Persian Gulf steamship line.—The Russian Steamship and Commercial Company proposes to establish a line of steamers, for both freight and passenger traffic, between Odessa and the harbors on the Persian Gulf.

German-South African steam communication.—The Houston Steamship Company, which has already a line of steamers plying between Bristol, Middlesbrough, Glasgow, Liverpool, London, and South African ports, has decided to establish a new steamship route, namely, between Hamburg and Cape Town, East London, Durban, and Delagoa Bay.

River Elbe shipping trust.—The Elbe boat companies and private

individuals engaged in the shipping business on the river have just formed themselves into a "cartel," or trust, which will go into effect on the 1st of January, 1904. The cartel has been formed in order to maintain a uniform freight rate, to prevent Elbe shippers from practicing disastrous cut-throat competition.

Financial agencies in Russia.—The department of commerce of the Russian Ministry of Finance has decided to ask the representatives of the different Russian stock exchanges, who meet in convention at St. Petersburg this week, whether bureaus of information giving credit ratings of Russian and foreign firms should be allowed to operate in Russia. At present, financial agencies are not allowed to do business in that Empire.

French-Asiatic trade.—A number of merchants and manufacturers of the city of Lyons have recently organized a company, under the name of the European East Asiatic Commercial Company, which has been formed for the purpose of furthering the commercial intercourse between France, Japan, and China.

German field pieces for Turkey.—The firm of Friedrich Krupp, of Essen, has just received an order for field pieces from the Turkish Government, which amounts to \$3,094,000. This, together with other orders upon which Krupp is now at work, will keep the entire war-material department in full blast for some time.

Siberian beef for Germany.—Last month three freight cars of boneless salted beef were received at Berlin from Kurgan, a station some 1,500 miles east of Moscow, on the Trans-Siberian Railroad. This is the first shipment of the kind which has been forwarded from Siberia to Germany. In order to comply with the German meat-inspection regulations the lungs, livers, and hearts must remain in each carcass.

Milan electric-light plant.—At a meeting of the Milan city council, which was held last week, the proposition to establish a municipal electric light and power plant was defeated. This action of the council insures that the Edison Electric Company will renew its contract with the city.

New college in Posen.—The Royal College of Posen, located at Posen, a city of 120,000 inhabitants and the capital of the Province of Posen, was opened by the Imperial Minister of Education in the presence of a distinguished gathering of the academic world. The eastern Provinces of Prussia are poorly equipped with higher educational institutions. At present the only universities in East Germany are those located at Breslau, Greifswald, and Königsberg. The Posen college will, however, within a few years become a university. The Posen college owes its existence to the personal interest manifested therein by Emperor William.

Exports of Italian food stuffs.—It is reported that the Credito Italiano, in conjunction with Signor Pisa, a prominent banker, has just formed the Docks Vinicoli ed Alimentari Export Company, of Milan, with a capital of \$965,000, for the export of Italian food products to Germany and Switzerland.

Paper market in China.—German paper manufacturers have just been informed that now is the time to export letter, packing, and printing paper to China. Detailed information may be obtained by applying to the Berlin Chamber of Commerce.

German iron for China.—It is reported from upper Silesia that an important rolling mill there has just received a large order for rolled iron from China. The order, while calling for a considerable quantity of material, is not all that could be wished for as far as the prices are concerned.

Austrian iron in China and Japan.—The steel and iron manufacturers of Austria, in order to further their export trade, are planning to open up selling offices in both Peking and Tokyo. Not only are these offices to have the sanction of the Austrian Government, but, it is reported, they will be given certain subventions.

Belgian electric iron works.—The Belgian iron works, at least a number of them—including the Société Cockerill—are going to equip their plants with electric motor power. The Cockerill Company, which it is believed will furnish the steel rails for the Antwerp-Brussels high-speed electric railroad, has been negotiating with Siemens & Halske, the German electric firm, for the equipment of its plant with electric motive power.

German and Belgian rails for Turkey.—German and Belgian iron works are making strenuous efforts to sell steel rails to the Hedjas Railroad, now being built by the Turkish Government, in the Province of Arabia, Hedjas district. Already a small stretch of this road, which will eventually connect Mecca with Damascus, has been built and the earthworks for almost 100 miles have been completed. The German iron trade appreciates what a large buyer of steel rails Turkey is destined to become in the immediate future.

Increase of Italian merchant steam marine.—At a recent meeting of the Italian General Navigation Company (Navigazioni Generale Italiana) it was decided to increase the capital stock of the company in order to permit the increase of the present size of its fleet.

Increase in the British-West Indies steam fleet.—The Royal Mail Steam Packet Company, which, in addition to its South American Line, has a biweekly steamship service between Southampton, England, and the West Indies, has just contracted with an English firm, Messrs. Armstrong, Whitworth & Co., for three large freighters for the West Indian trade exclusively.

German steamships for the China coasting trade.—It is reported that the North German Lloyd Steamship Company, of Bremen, has just purchased eight steamers from the Rickmers Rice Mills Shipping and Shipbuilding Company, of Bremen. These steamers, six of which have been launched within the past few years and two of which are being built, have a draft of 18 feet and a carrying capacity of 2,500 metric tons each. They are intended for the Chinese coast trade service.

German tramway syndicates.—The city of Ghent, Belgium, has just disposed of its "tramway system" to a syndicate, composed for the most part of three companies, namely, the Tramways de Gand (Belgian), the Union Electrique (Belgian), and the Allgemeine Elektrizitätsgesellschaft (of Berlin). One of the conditions of the sale is that the lines be equipped with electricity as soon as possible. German electric companies are planting themselves solidly in all European countries. When one line of a country's industry obtains a footing in a foreign market it is just so much easier to introduce another line.

BRAINARD H. WARNER, Jr.,
Consul.

LEIPZIG, GERMANY, *November 6-12, 1903.*

DISCOVERING OCEAN SHALLOWS.

(From United States Consul-General Guenther, Frankfort, Germany.)

The French naval engineer Renaud calls attention to the fact that a captive balloon rising to a certain height may be employed to discover the presence of rocks beneath the surface of the water.

Every sailor knows that in certain parts of the seas shallows can be detected in time by the coloring of the water so that they can be avoided. From certain heights shallows are shown still more plainly, as, for instance, from the hills surrounding the entrance to Brest. From this it follows that from a captive balloon at a certain height above the water, especially in waters containing many submarine rocks and tortuous channels, shallows can be located with the eye, and better still through photography.

In some localities it will only be possible to correctly ascertain the channels and shallows by means of a balloon. Mr. Renaud expresses the opinion that the balloon will become an important part of the equipment of survey ships.

RICHARD GUENTHER,
Consul-General.

FRANKFORT, GERMANY, *November 6, 1903.*

SUSPENSION FERRY OVER THE LOIRE.

(From United States Consul Ridgely, Nantes, France.)

The most important enterprise inaugurated at Nantes during this year is the "pont transbordeur," or overhead ferry, which will connect the old quays on the north side of the Loire with the new ones on the south side, where the State railway is about to construct a large freight depot. It is a stately and graceful structure consisting of two tall steel towers, one on each bank of the river and joined together by a horizontal bridge or railway track 490 feet long and 165 feet above the surface of the water. An inverted steel carriage or car travels along the rails, and suspended from this by steel cables is the platform, or ferry, which has two divisions—one for horses, vehicles, and railway cars and the other for foot passengers. Electric motive power operates the car from which the ferry is suspended and the crossing is thus quickly and easily effected. Trial trips have already been made and the ferry is to be thrown open to the public about November 1. Ferry rates are:

	Cents.
Foot passengers.....	1
One-horse vehicles:	
Empty	5
Loaded.....	8
Two-horse vehicles:	
Unloaded.....	7
Loaded.....	10

This pont transbordeur seems to solve the question of crossing rivers or other channels in the most simple and practical way. It moves rapidly and in no manner interferes with navigation, since, owing to the great height of the pont from which the ferry is suspended, ships of the tallest masts may pass under it; moreover, it does not involve the ascents and descents of the ordinary bridge approaches, and being built on an air line it realizes the minimum distance to be crossed. The cost of this structure was a little more than \$200,000, and the projectors believe it will be a paying venture. There is a similar pont transbordeur at Bilbao, Spain, and others at Rouen and Martrou, France, and Bizerte, Tunis. I inclose herewith two photographs of the pont transbordeur at Rouen, of which the one just completed here is almost a duplicate.

BENJAMIN H. RIDGELY, *Consul*.

NANTES, FRANCE, *October 4, 1903.*

GENERAL VIEW OF THE OVERHEAD FERRY AT ROUEN.

OVERHEAD FERRY AT ROUEN IN SERVICE.

CANADIAN BOUNTIES ON LEAD.

Under date of November 9, 1903, United States Consul L. E. Dudley, of Vancouver, British Columbia, transmits the laws passed by the Canadian government, granting bounties on iron, steel, and lead. The laws granting bounties to iron and steel have already been published (see CONSULAR REPORTS for October, 1903).

The following is the law granting bounties on lead:

That it is expedient to repeal chapter 8 of the statutes of 1898 entitled, "An act to provide for the payment of bounties on lead refined in Canada," and to enact as follows:

1. The Governor-General-in-Council may authorize the payment of a bounty of 75 cents per 100 pounds on lead contained in lead-bearing ores mined in Canada, such bounty to be paid to the producer or vender of such ores, upon evidence that such ores have been smelted in Canada: *Provided*, That the sum to be paid as such bounty shall not exceed \$500,000 in any fiscal year: *Provided, also*, That when it appears to the satisfaction of the minister charged with the administration of this act that the standard price of pig lead in London, England, exceeds £12 10s. (\$60.83) per ton of 2,240 pounds, such bounty shall be reduced proportionately by the amount of such excess.

2. Payment of the said bounty may be made from time to time to the extent of 60 per cent of the full bounty authorized, subject to adjustment at the close of each fiscal year. If at the close of any year it shall appear that during the year the quantity of lead produced on which the bounty is authorized exceeds 33,333 tons of 2,000 pounds, the rate of bounty shall be reduced to such sum as will bring the payments for the year within the limit mentioned in section 1.

3. If at any time it shall appear to the satisfaction of the Governor-in-Council that the charges for transportation and treatment of lead ores in Canada are excessive, or that there is any discrimination which prevents the smelting of such ores in Canada on fair and reasonable terms, the Governor-in-Council may authorize the payment of bounty at such reduced rate as may be deemed just on the lead contained in such ores mined in Canada and exported for treatment abroad.

4. The said bounties shall cease and determine on the 30th day of June, 1908.

5. The Governor-in-Council may make regulations for carrying out the intention of this act.

LACE INDUSTRY OF FRANCE.*

(From United States Consul Brunot, St. Etienne, France.)

DEVELOPMENT OF LACE MAKING IN FRANCE.

The manufacture of laces in France dates back to the days of Louis XIV. In the month of August, 1663, the famous "Declaration du Roy" was published, decreeing the establishment in Arras, Rheims, Sedan, Alençon, Aurillac, and other towns in the Kingdom

* Accompanying this report were illustrations of lace makers at work, lace machine, and spool, which are filed in the the Bureau of Statistics.

of manufactures of all kinds of thread and needlework, after the manner of the points made at Venice, Genoa, Ragusa, etc. They were to be called "pointes de France" and the decree provided that all such work should be free from duty. In order to encourage the industry in the country, another decree, dated October 12, 1666, forbade any person of any quality or condition to wear, under pain of confiscation of the articles and £1,500 fine, any Venetian or other foreign lace, no matter of what kind. The following year a second decree was issued forbidding the wearing of any dress with silver or gold facings and of lace made outside the country. These decrees also forbade the manufacture or sale of any lace other than that made in the royal manufactories and according to the designs of the directors of the establishments.

Colbert, the minister of Louis XIV, was the chief instigator of these Draconian decrees. He obliged the manufacturers to make only one point or design, to the exclusion of any other. A large number of localities only obtained their living by the kind of lace familiar to them, and everywhere it was believed that the opening of manufactories whence, henceforth, designs were to be issued would cause ruin. But the real aim of the Government establishments had not been understood, which was to perfect the industry, in providing models, designs, and methods of execution, constituting precious elements for the improvement of the ordinary manual work.

For twenty years Colbert had to contend with popular prejudice on the subject, but he finally triumphed, for it was through his efforts that the admirable "pointe de France" took rank among the arts and industries of the Kingdom.

HAND VS. MACHINE MADE LACE.

To-day, in spite of the progress of machine-made lace in the numerous manufactories of the northern and eastern Departments, the handmade article holds a respectable rank. The lace makers (women) throughout the country not being organized or syndicated after the manner of other workers, it is difficult to state exactly the number of those who work at the industry, but it does not fall short of 200,000. The wages they receive are in general but small, in proportion to the talent and amount of work furnished. There are places where a clever lace maker will not earn, for twelve or fourteen hours' work, more than 30 cents a day.

In the country around Caen, Bayeux, and Falaise, in the Calvados, where formerly a great deal of lace was manufactured, the inhabitants have decreased by 27,182. In the same Department in 1851 there were 50,000 lace makers, while in 1875 they had fallen

to 30,000. Yet, in spite of the extraordinary improvement in the machines, the lowering of the wages, and the decline of public taste, the handmade industry holds a good many centers.

Alençon still produces its famous point d'aiguille, which enjoys so much favor and employs so many workers (10,000). Handmade lace is found all along the northern coast—Cherbourg, Honfleur, Bolbec, Fécamp, Dieppe, Bayeux, Falaise, and Lisieux. At Honfleur and Dieppe a special kind is manufactured, imitating Valenciennes. But the most active center is at Bayeux, where Chantilly lace is manufactured.

Flanders, the cradle of the lace industry, has lost much of its prestige, while Lille and Arras produce but a small quantity of cheap grades. For Valenciennes, the town celebrated above all others for the lace art, the nimble fingers have ceased to ply the fuseau for nearly a century, although in certain places, such as Bergues, Cassel, Hazebrouck, and Bailleul, an imitation of this fine lace is manufactured.

In the Department of the Vosges and at Mirecourt a very fine imitation of Brussels point is made, and 20,000 to 25,000 women still work therein.

LACE MAKING IN THE HAUTE-LOIRE.

Lace making is the principal industry of the Haute-Loire. The wives and daughters of the farmers are to be seen everywhere, in the most remote villages as well as in the towns, turning the spindle of the cushion, set on their laps, with surprising agility. As we look on, the web is being formed beneath a forest of pins with glass heads of various colors, which mark the loop of the threads, and the charming design furnished by the manufacturer soon appears.

Lace making in this district is said to have been brought from Italy at the time when the pilgrimage of the Black Virgin of Le Puy was at its greatest activity. At the time when men wore ornaments and finery unknown to our day lace was ardently sought to set off the clothes. In spite of the distance from the great centers of industry, the Haute-Loire took a large place by the side of Flanders and Alençon. This was due, in great part, to the cheapness of the hand work, the natural aptness of the women, the proximity of Lyons, where the fine Holland thread could be procured, and above all to the neighborhood of Beaucaire. The celebrated fair held in this town afforded ready output to the industry, and thence the lace spread over the whole south of France, and even to Spain.

Everyone would have lace—men, women, officers and grave magistrates, nobles and bourgeois; consequently, Le Puy and its Department passed through a period of extraordinary prosperity. This good time was seriously threatened by a foolish edict obtained

from the Parliament of Toulouse and sanctioned by the King, which condemned the wearing of any kind of lace or other similar ornament. A Jesuit, however, living in the Haute-Loire, understanding the ruin such an absurd decree would bring to the population, hastened to Toulouse and by considerable effort succeeded in having the edict abrogated. Then he interested the religious orders in the development of the production, and by their missions in South America an important market was opened for lace in that part of the world.

For a long time Spain and her immense possessions constituted one of the principal markets for Le Puy. Those markets lasted until the great commotions at the end of the eighteenth century and the successive wars. This period coincided with the waning of the inventive mind of the manufacturers, and the lace, deprived of its best customers, was threatened, by the simplicity and austerity of the new fashions, with destruction. The catastrophe would have happened were it not for a manufacturer called Falcon, who endeavored to work against the abandoning of lace making by completely renovating the industry. With natural taste, as well as with a certain amount of practical knowledge, he visited the principal merchants of Lyons and Paris and the museums and private collections. Stored with his experiences, he returned to his native country and immediately began to educate the popular mind in new forms and styles of lace. In a short time the industry once more became prosperous, and to-day, thanks to the ingenuity of the manufacturers and the cheapness of labor, the lace makers of this picturesque Department have attained to well-merited fame. For this reason General Gallieni, the governor of Madagascar, recently applied for and obtained a few of the best artisans of the Haute-Loire to introduce lace making into that island, believing that in time the Malgache women may become experts. For this purpose he organized a school where the art is taught to children alone. It is through them that the intelligent governor expects to implant this interesting industry in the colony.

In the Haute-Loire the number of women lace makers is computed at 60,000, while about 30,000 more are scattered through the neighboring Departments. It is difficult to give the amount daily earned by these women, as it varies according to the quality of the lace and the section of the country. Some earn only 10 cents a day and none exceed 40 cents, a sum above the average.

The women of the Haute-Loire seem to be born with the talent of lace making and the intelligence necessary to the interpretation of the designs. From an early age the women, of all classes, are familiar with the "fuseau," and the young girls very quickly learn the

mysteries of the "entre-deux," as well as the infinite varieties of "passemens" indicated on the card of design. This traditional apprenticeship the women of the Haute-Loire rarely forget. Doubtless when they marry they perform the various home duties willingly, but in their hours of leisure they return to the "cushion" to weave some beautiful pattern.

If you want to see the peasant at her favorite work you must go to the "convegi," which in their patois means a meeting or club of women out of doors in summer, and in the "cabinet" or principal room in the house in winter. Rarely is a woman seen working alone. The group, from which cradles are not excluded, affords a curious spectacle in fine weather. Eight or ten women sit round in a circle in the shadow of some house. The youngest have the face framed in a high frill bonnet, covered with lace and tied with a bright ribbon. Their elders have kept up the old custom—a white cap with a very small felt hat, or "tsapelon," fastened on the top by means of a black ribbon.

All of them hold the lace machine ("carreau," a kind of box lower in front than behind and covered with leather and furnished with a cylinder on which to roll the lace as it is made) on their laps. Each cushion has from six to twenty-eight pairs of spools, or spindles. In winter five or six families meet in a house. In the center of the room is a round table supporting a very primitive lamp—sometimes a glass filled with colza oil, in which a wick of raw cotton is steeping. All around stand four or five globes of thin glass filled with water; a ray of strong light is thrown by each of these primitive natural reflectors, permitting the women to work till bedtime.

LACE EXPOSITION AT LE PUY.

The picturesque city of Le Puy organized this summer a local exhibition of art in which lace held an important place. The lace exhibition was divided into two sections—ancient and modern. In the former were found very rare specimens lent by Paris houses and private families. Among these I remarked guipure of Venice, Milan lace, point de France Louis XIV, point d'Alençon made for Napoleon I, a magnificent handkerchief of Marie Antoinette, etc.

The modern section was composed almost entirely of the product of this region, consisting of fancy handkerchiefs, corsages, sleeves, collars, cuffs, appliqués for dresses and hats, bed toiles, cushion and pillow covers, curtains, tablecloths, etc.

In another room were exposed a considerable variety of looms, from the humble carreau (cushion) to the most complicated machine representing the latest expression of modern improvement.

A large number of visitors were attracted to this exhibition, and

it is believed that this industry, so long vegetating in the Haute-Loire, will receive a considerable impulse from the interest shown in the exhibition.

LACE MAKING IN THE PUBLIC SCHOOLS.

Before closing this report, I must add that the French Government, recognizing the importance for the country of the development of the lace industry, has passed a bill through the Chambers, instituting the professoriate of handmade lace in the public schools of Departments where lace is manufactured and also in the normal schools of the same.

Further, special district technical schools for improving the artistic education of the work girls and designers are about to be opened in certain centers.

HILARY S. BRUNOT, *Consul*.

ST. ETIENNE, FRANCE, *November 5, 1903.*

LACE INDUSTRY OF PLAUEEN.

(*From United States Consul Muench, Plauen, Germany.*)

PROSPERITY OF PLAUEEN.

In area this district is not large. A radius of 20 miles, extended from the city of Plauen in any direction, will strike its boundaries; but in population and intense industrial activity it fairly rivals any other district of industrial Saxony. Geographically, financially, and in population the city of Plauen is its central point, though a number of other cities of considerable size lie within its confines. Plauen itself is, in some respects, one of the most remarkable cities in Germany. In less than fifteen years it has doubled in population and is now close to the 100,000 mark.

CAUSE OF PLAUEEN'S PROSPERITY.

Practically, this boom condition is due to one cause—the continued prosperity of the lace industry. Plauen lace, once the extremely limited product of a few hand workers, has now gained an enviable reputation the world over and in importance overshadows all other industries of this region.

PLAUEEN LACE MANUFACTURE AND TRADE.

Lace working or tracing.—Plauen lace, as such, is perhaps too well known now to justify any special description. Having established a market and a reputation of its own it is already being imitated in

other lace centers; still it maintains its hold upon the American market along with other and perhaps more pretentious varieties. In the main, it may be designated as a "guipure," and is worked or traced out either by hand or by machine upon a loose foundation of woolen muslin, which latter is then "burned out" or "etched away" by means of strong chemicals that wholly consume the woolen fabric, leaving the cotton-lace structure entirely unaffected. Similarly, a cotton fabric, chemically prepared, may be used as a basis, and silk laces are worked after practically the same fashion.

Lace machinery.—Hand labor has long since almost entirely given way to the more productive and profitable methods of machine work, and of such machines there are substantially three classes: First, a small machine which is operated by hand; second, a power machine, at which the chief operator guides the simultaneous movement of all the pattern-working needles by means of a pointer moved along the tracings of an enlarged pattern before him; and third, the most modern Jacquard machines, by which the design is worked automatically through perforated cards that direct the movements of an ingenious and complicated little piece of mechanism attached to the lace loom. The Jacquard machines are quite expensive, which may account for the presence in this district of only some 150. The pressing nature of most orders for this class of laces is such that the total number of machines in the commercial district was increased by some 2,000 in the past year. On May 1, 1903, there were 2,379 hand machines and 4,423 power machines in this district, and the number is steadily being added to. Each power machine must be attended by several experienced operatives, who watch needles and bobbins as well as remedy any imperfections in the work of the machine. In general, every loom or bobbin ("Schiffchen") machine is separately operated through a $\frac{1}{2}$ -horsepower electric motor, this method having been found more practical than the operation of all the looms in one shop by means of a single large motor.

How the local business is conducted.—The mode of conducting the local lace business (as, also, in a measure the curtain trade) is divisible into several classes. Many of the foreign dealers are represented here by special resident agents, while others come hither at regular periods to place their orders, but the bulk of the goods is secured through resident factors or commission men, who each act for a number of foreign customers in locating orders for goods, seeing to their proper completion, and expediting them when ready for shipment. Not all firms posing here as "manufacturers" are such in reality. The largest proportion of lace looms or bobbin machines in the district is held by "Stickmeisters" (master lace workers). These generally own one or more machines, hire their own help, and

purchase their own raw material, but do not deal with the purchaser direct.

Labor and wages.—Though expert operatives (male or female) are able to earn from 25 to 50 marks (\$5.95 to \$11.90) per week at lace making—the highest average wages paid in the textile trades—during the months of pressing orders the demand frequently exceeds the supply. Much is done to relieve this want by the excellently conducted “industrial school” at Plauen, together with four branch schools located in as many other cities of this district, in which some 200 scholars constantly receive instruction in all the details of sketching and lace making; but the long list of advertisements in the local daily papers demonstrates that the supply of skilled labor is still unequal to the demand, and as long as fashion continues to favor Plauen laces this district will continue to be the Mecca of all textile workers. The scarcity of skilled labor in the branch here discussed has led to a growing disposition to send large quantities of partly finished goods into adjacent Bohemia, thus utilizing the cheap labor of that country in completing the less difficult portions of the work. Interesting questions have arisen from this practice as to the utility as well as control of this system of composite manufacture (known as “Veredlungs-Verkehr”), many of which are still unsettled.

Imitation lace.—Cotton and silk guipure laces are by no means the only products of the apt skill of Plauen manufacturers. There is scarcely a lace known and producible by the aid of machinery which has not found a maker here. One or the other manufacturer will turn out either guipure, Cluny, Irish point, Valenciennes, Venetian, Italian point, Mechlin, d’Alençon, Creponne, Teneriffe, or Paraguayan, as may be desired.

Lace purchases of the United States.—During the fiscal year ended June 30, 1903, the exports of lace and embroideries from the Plauen district to the United States amounted to more than \$3,000,000.

Handmade lace.—Large quantities of lace are yet manufactured by hand in the distant mountain homes of the poorer classes. This is especially true of a very attractive article of linen torchon or pillow lace; yet the latter rarely reaches the general market in its original state, but is consumed by local manufacturers of garments and robes. So small, however, are the earnings which reward these workers that they are being gradually absorbed by and drawn into the machine-owning establishments that promise steadier and more remunerative employment. Another force driving the pillow-lace workers out of that employment are the torchon-lace-making machines of Barmen, Germany, which produce a very cheap though never so ornate a quality of torchon lace.

When it is remembered that only 50 per cent of the expense of

production is chargeable to raw material, the rest being expended for wages, interest on capital invested, and distributed as profits, it will be readily understood why this community is prosperous.

HUGO MUENCH, *Consul*.

PLAUEN, GERMANY, *October 12, 1903.*

MANUFACTURE OF DRESS TRIMMINGS IN EIBENSTOCK.

(From United States Commercial Agent Harris, Eibenstock, Germany.)

The export of dress trimmings from this consular district to the United States during the past five fiscal years was as follows:

1899.....	\$91, 821. 97
1900.....	142, 451. 58
1901.....	155, 514. 37
1902.....	234, 564. 65
1903.....	232, 315. 80
Total.....	856, 668. 37

The dress-trimming industry, taking everything into consideration, has prospered during the past few years. The rate of wages has never been higher and the men, women, and children employed in the factories have never lived better than at the present time. On the other hand, however, it may be said that the cost of living has never been so high. Articles of food and luxuries are expensive here for the reason that it is a mountainous country and a great deal that is consumed must be shipped in from the lowlands.

The skilled embroiderers here who can afford it buy their own machines and set up for themselves at home. The wife and children assist in threading needles and looking after stitches. An embroiderer so situated earns from \$8 to \$10 per week on the hand machines and on the motor machines from \$14 to \$18 per week, exclusive of the wages earned by different members of his family.

The majority of the manufacturers, however, have their own machine houses and factories and employ their own workmen. The needlework is done almost exclusively by young women between the ages of 16 and 25. They earn from \$3 to \$4 per week.

A great deal of hand work is done by individuals living in the neighboring villages. The dress-trimming house industry is highly developed. In winter the people in the immediate vicinity of Eibenstock make this their chief occupation.

The competition of American machine-made dress trimmings is becoming keener every year. The American buyers who come over to-day order handmade trimmings for the most part. The day

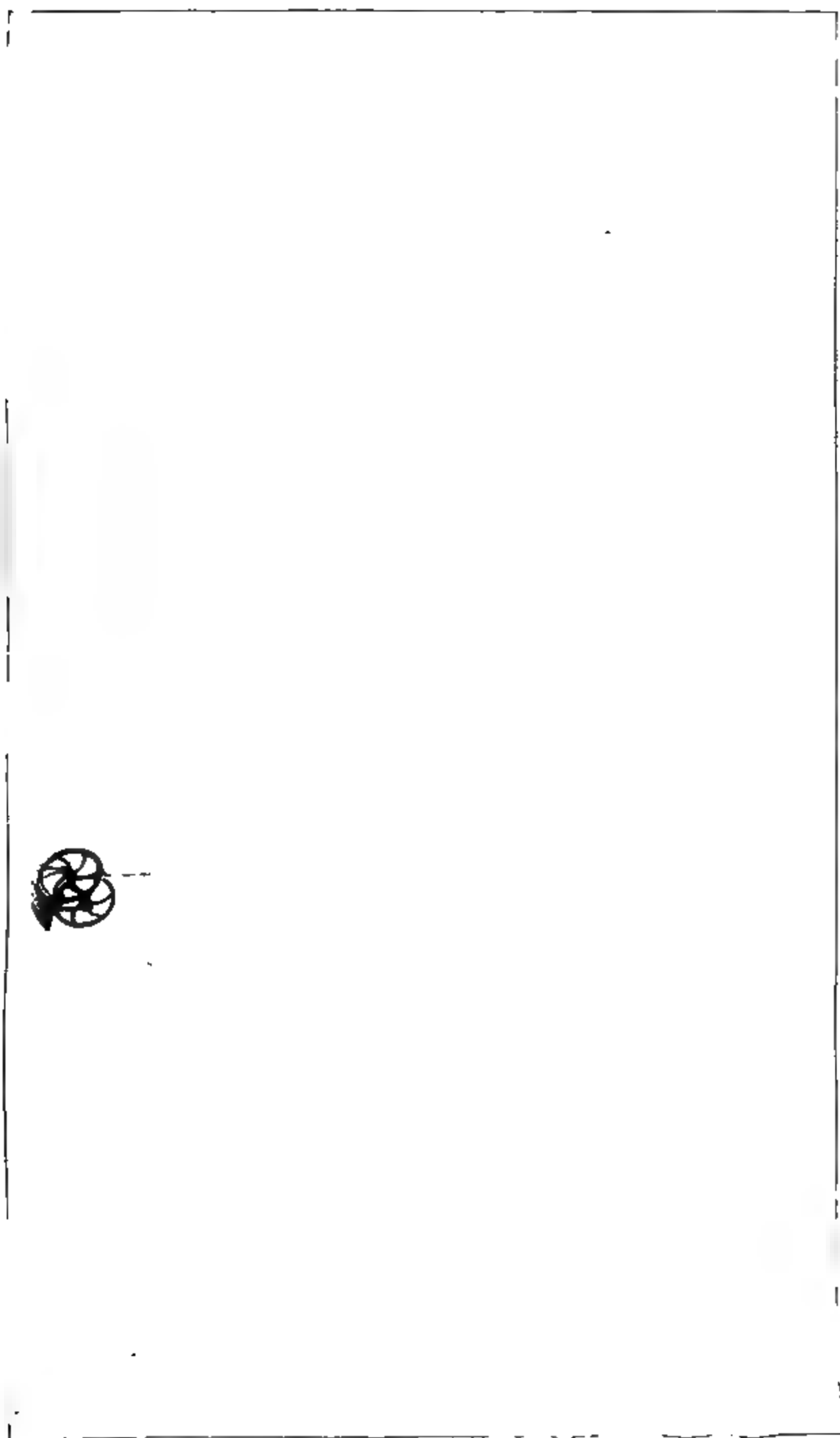


FIG. 1.—EMBROIDERING MACHINE WITH PANTOGRAPH ATTACHMENT.



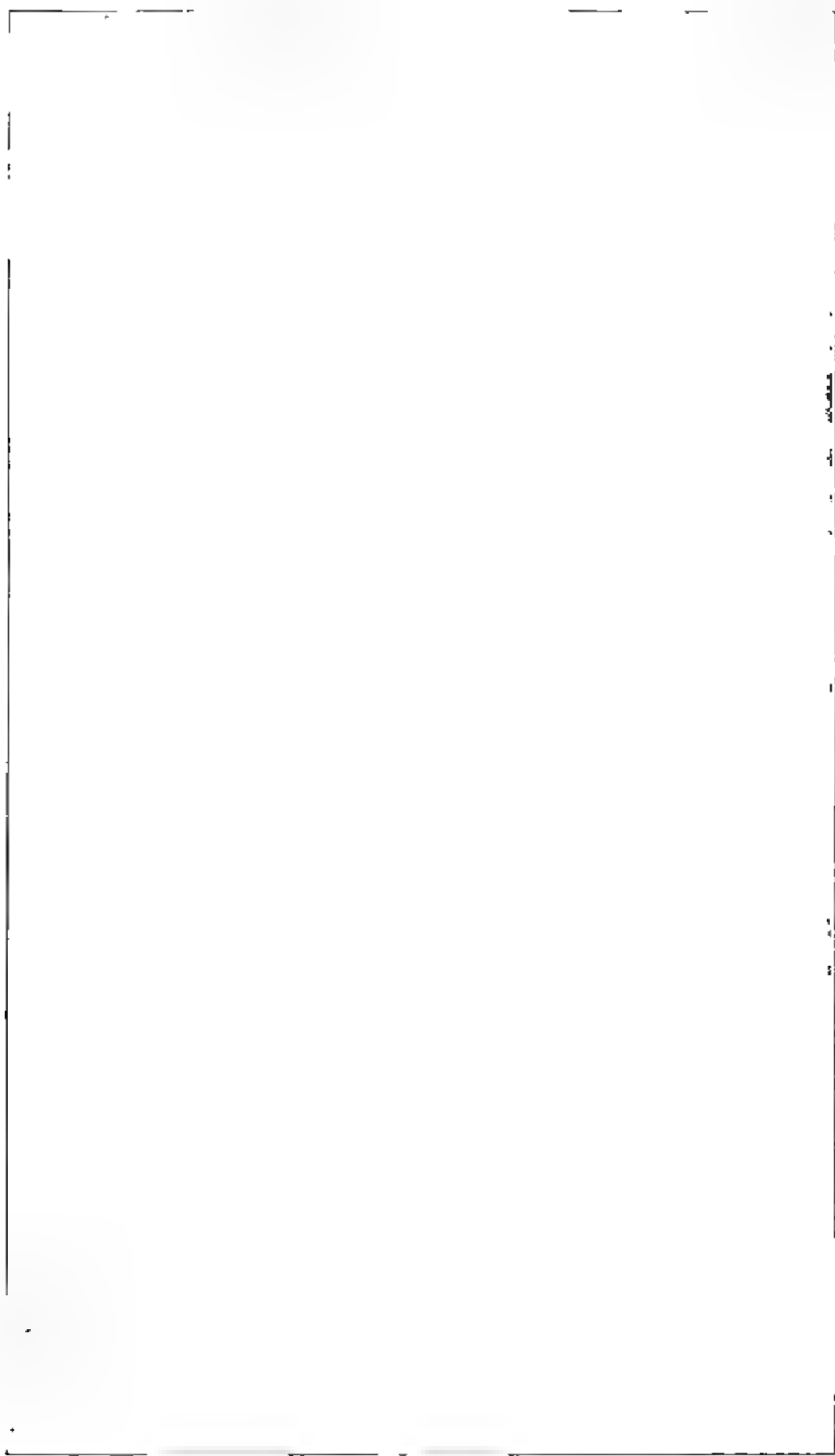


FIG. 2.—LATEST IMPROVED EMBROIDERING MACHINE.

seems far distant before the United States will be able to compete with Eibenstock and Annaberg in hand-made embroideries, for the reason that the industry has taken deep root in this country, and its present highly developed state has only been attained after a severe schooling which reaches through many generations.

A great many workmen from this consular district have gone to the United States and from all reports are doing well in New York and Philadelphia. During the past few years a number of second-hand embroidering machines have been certified at this office which were intended for these emigrated workmen in America. The largest manufacturers of dress-trimming machinery are as follows: Vogtländische Maschinen-Fabrik, Plauen, Saxony; Maschinen-Fabrik Kappel, Chemnitz, Saxony; and F. Martini & Co., Frauenfeld, Switzerland.

The first-named firm has very kindly supplied me with the accompanying illustrations.

Fig. 1 shows the Schiffchen embroidering machine, Model H, with a pantograph or instrument at the left, which reduces the pattern about six times. Schiffchen machines are all driven either by electricity, gas, or benzine.

Fig. 2 shows one of the newest machines made, and is the same as fig. 1, except that the pattern is followed and reduced in size automatically instead of with a pantograph.

The hand machines are built on the same plan. They are smaller than the Schiffchen machines, and are kept in action by means of a hand crank inserted between the machine and pantograph.

ERNEST L. HARRIS,
Commercial Agent.

EIBENSTOCK, GERMANY, *October 30, 1903.*

PERMANENT FINISHES FOR CLOTH.

(From United States Consul Day, Bradford, England.)

A subject of importance to manufacturers in the United States is one that has very largely engaged the attention of both dyers and finishers here, viz, that of permanency of finish in textile fabrics, in which Bradford finishers still excel, and I know of no branch of textile manufacture where advancement has been so marked. Numerous inquiries have been received from United States manufacturers asking for details as to how this permanency of finish is obtained; naturally, the utmost reticence is observed in imparting information. However, it is now possible to finish both woolens and

worsted in such a way that the finish is not affected by the tailor's hot iron. The best information obtainable is that a German machine, manufactured by Paul Klug, Maschinen-Fabrik, Crimmatschau, Sachsen, Germany, is used to obtain this finish. The machine and its operations are of too technical a character to be explained in a communication of this sort, but it seems that the finish is obtained by forcing dry steam through the fabric. This is done before the goods are pressed, and all subsequent operations seem to have little or no effect in destroying the conditions created by this finishing process. Several of the very best finishers in Bradford and Leeds are using this machine.

ERASTUS S. DAY, *Consul*.

BRADFORD, ENGLAND, *October 20, 1903*.

MANUFACTURE OF ACHROODEXTRIN AND ALCOHOL.

(From United States Consul-General Hughes, Coburg, Germany.)

The object of a process invented by Georges Reynaud, of Paris, relates to manufacturing industrially and under especially favorable conditions of achroodextrin and alcohol. The process consists essentially in soaking the material to be treated in twice its weight of water and in heating the resultant mass under pressure in an autoclave or digester at a temperature of 160° to 220° C. for about an hour and a half. Under the influence of this temperature, the cellulose and amylaceous constituents of the treated materials are converted into dextrin, or more exactly into achroodextrin, which, by reason of its lower density, could advantageously replace ordinary dextrin in its industrial applications. Hitherto achroodextrin has only been known as a laboratory product, because the processes in vogue for the manufacture of dextrin always yield ordinary dextrin, or erythrodextrin. The new process does not necessitate the presence of any acid or other auxiliary substance, is most economical, and obviates the unavoidable defects connected with the employment of acids; the manipulation is convenient and presents no danger. As soon as the conversion of the cellulose and amylaceous constituents into achroodextrin is completed, the aqueous solution is withdrawn from the apparatus and may then be directly employed for industrial exploitation or submitted to a second operation for the purpose of converting it into alcohol. In the latter case, the aqueous solution is heated to 55° C. and a diastase, or pancreatic juice, added to produce saccharification, which is completed in about three hours.

The liquid is then caused to ferment by the ordinary means, in employing yeast, care being taken to add two-thirds of 1 per cent of acid; when fermentation ceases the liquid is distilled in the usual way. This small quantity of acid may be introduced into the autoclave at the commencement of operations instead of during fermentation.

OLIVER J. D. HUGHES,
COBURG, GERMANY, *October 23, 1903.* *Consul-General.*

RADIUM INDUSTRY.

(From United States Consul-General Guenther, Frankfort, Germany.)

Notwithstanding the difficulty in its production (many tons of ore being required to produce 1 gram) a radium industry has already developed in Germany and France, and although 1 gram is sold at a little less than \$2,000 the manufacturers are said to have orders for several hundred grams.

The demand for medical purposes exceeds the supply. Radium possesses all the important qualities of the Röntgen rays in addition to the invaluable property of being ready for use at any time and furnishing its rays without the employment of apparatus. It has been demonstrated that a small glass tube, not larger than a goose quill, containing a little more than a thousandth part of a gram, is as effective as an expensive and complicated electric apparatus for the treatment of cancer—surpassing the best effects of the Röntgen rays.

The ease with which radium can be administered locally, as for instance in the nose or throat, is an invaluable advantage.

The fact that radium exerts a very peculiar influence upon light-emitting bodies has given rise to the hope that it may eventually play an important rôle in the industry of light. A minute quantity of radium is sufficient to produce a strong light from a layer of zinc pyrites, and this light produces no heat, so that loss of energy is avoided. Radium rays, unfortunately, possess the dangerous property of injuring the human skin by producing severe burns.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *October 3, 1903.* *Consul-General.*

IMPROVEMENT IN YARN MANUFACTURE.

(From United States Consul-General Hughes, Coburg, Germany.)

An invention has been recently made by an English manufacturer that relates to improvements in yarns such as are to be used in the manufacture of textile goods, the object being to construct a serviceable yarn from material that has hitherto been considered of little or no value, or to construct an exceptionally strong yarn at a very cheap rate. The invention consists of a yarn having a core or center thread around or upon which is the body or yarn proper. The core yarn may consist of one or more materials, such as cotton or worsted, or a combination of the two, and the body of cotton or other material, such as silk, wool, shoddy, mungo, flax, waste, or a combination of any of these. According to this invention, the core thread (consisting, say, of cotton) is covered entirely with any other desired fiber (say, of wool), so combining the strength of the core with the utility or appearance of the body. By combining the core and body as described, fibers, such as waste or mungo of such short staple as to be of practically no spinning value, may be utilized in the manufacture of textile goods possessing equal or greater strength and being similar in appearance to goods manufactured from high-class fiber. The core and body constituting the improved yarn are combined in the following manner:

The fiber forming the body of the yarn is removed from the swift, or carder, by means of a condenser doffer and card and iron strippers in the ordinary way, and the core thread is brought from any adjacent point to and between the card stripper and the iron stripper, from which point the two together pass between the rubbers and the body is rubbed around the core sufficiently to keep the two together when on the condenser bobbin, from which the yarn is spun in the ordinary manner.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *October 23, 1903.*

Consul-General.

SOLVENT PROCESS OF DEGREASING WOOL.

(From United States Consul-General Hughes, Coburg, Germany.)

The solvent process employed for degreasing wool consists essentially of treating the wool, in closed digesters, with volatile solvents—like benzine, petroleum spirit, carbon bisulphide, or carbon tetrachloride—until a complete extraction is effected. One of the principal features of a new solvent process is the employment of compressed gas as a forcing or motive power to circulate the solvent

through the wool under treatment. It is used to press the liquid solvent out of the wool as well as to blow out of it such solvent as has not been removed by pressure. It is also used as a heat-carrying medium to the wool, and as a carrying medium for the solvent vapor from the wool. It is furthermore used as an atmosphere wherein to carry on the extracting operation, both for covering the solvents in the reservoirs and for taking the place of the solvent removed from any part of the apparatus. This prevents the ignition of the solvent vapor by any spark which might accidentally be communicated to it, and since the gas is always moved in a closed circuit it prevents the loss of solvent vapors and can be used repeatedly without limit.

The saving effected by the "solvent process" to establishments that degrease and work their own wool for worsted purposes can be expressed in round numbers as averaging 1 penny per pound, figuring on the greasy wool. This saving is made in the cost of the soap, which is entirely dispensed with by the new process; in a greater yield of the wool fibers, since none of it is dissolved by soap and alkali; in a larger proportion of top to noil, because the wool, being free from any felted parts, cards and combs freely without breaking the fibers or the making of nibs; in a larger production of the cards, combs, and drawing and spinning machinery; in the superior softness and appearance of the finished product; in the wool fat removed; and in the potash recovered. The cost of the degreasing operation, including labor, solvent, power, interest, depreciation, etc., is, it is estimated, more than covered by the soap saved.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *October 23, 1903.*

Consul-General.

ACID-PROOF RUBBER GOODS.

(From United States Consul-General Hughes, Coburg, Germany.)

There being several important lines of rubber goods which require to be acid proof, and from the nature of the goods not infrequently sold under that designation, it would appear that the points upon which the resistance of rubber goods against acids depend are none too well recognized.

Dr. C. O. Weber says, in the India Rubber Journal of September 28, that pure vulcanized rubber is very little acted upon by acids; the less pure the smaller the capability of the rubber to absorb aqueous liquids. It is well known that Para rubber on prolonged immersion in water will eventually be found to have absorbed from 24 to 28 per cent of water. On testing different brands of rubber in this

respect, it is soon found that they exhibit great differences in their capability of absorbing water, and it is also found that this variation very closely follows the percentage of resinous matter contained in the various brands. This should not, however, be taken to amount to a recommendation to use, in the manufacture of acid-proof goods, resinous, low-class rubbers only. This would in so far be a mistake as the rubber substance proper of the low-class rubbers is itself much more readily affected by the above-named acids than the high-class rubbers, notably Para. But this observation of the decreased capability of low-grade rubbers to absorb water clearly indicates the line to be followed in the production of acid-proof goods. It will, indeed, be found that mixings of Para with resins show a very much decreased capability of water absorption, but there are, as a matter of fact, several substances which prove far more efficient in this respect than the resins and which at the same time are less objectionable for compounding purposes than the latter. These substances are paraffin wax, ceresin, mixtures of paraffin wax and heavy mineral oils, and, better still, the products obtainable by treating paraffin wax with sulphur.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *November 6, 1903.*

Consul-General.

DROUILLARD'S DRIFTER BALLOON FLOAT.

(From United States Consul Jackson, La Rochelle, France.)

The drifter balloon float is an ingenious and very simple apparatus that is used to carry from a vessel in distress to land, and vice versa, a rope by means of which the passengers and crew of the vessel can be rescued.

It is formed by a specially shaped balloon, which presents to the wind a plain surface 1.8 meters long, 1.3 meters high, and 1.2 meters wide (71, 51, and 47 inches) at base. This balloon tows an apparatus formed by two pieces of timber joined to form a right angle, of which the vertical beam is 2 meters long and 0.55 meter high (79.7 and 21.6 inches) and the horizontal piece 1.2 meters by 0.3 meter (47 by 11.8 inches) wide. In order that it may be maintained in a proper position, there is lead attached to the under side as ballast. This "drifter" again tows a rope 1,500 to 2,000 meters (4,918 to 6,560 feet) long, which is to be used as a pass rope between the vessel in distress and the land.

The drifter is connected with the balloon float by a regulating arrangement by means of which, before the drifter is thrown at sea, an angle from 60° to 90° from the direction of the wind is supposed to be obtained.

The balloon float is composed of three wooden or light metal hoops, covered with a special tissue. When not in use it folds up like an accordion and occupies a very small space.

The apparatus as used for experiments is covered with cotton cloth, but when in practical use it is to be covered with strong sail tissue in order to be able to stand heavy seas and contact with the rocks when landing. To use it one draws the folds apart and it inflates itself automatically; the valve is then closed and the balloon is fastened to the drifter. The inflation can be completed, if necessary, by various means indicated by the inventor; its weight is 7 kilograms (15.4 pounds).

When not in use the drifter is folded up into four parts by means of hinges and occupies a very small space. When in use its four parts are maintained open by two hooks and an iron bar; the required angle is then regulated by means of the webfoot (*patte d'oie*), the line employed as a pass rope is attached, and the whole apparatus is thrown into the sea. The weight of the drifter is about 30 kilograms (66 pounds).

The balloon float then draws the drifter to a distance with a speed and strength proportionate to the force of the wind, for the stronger the wind the more efficacious the appliance; the drifter steers it like a rudder.

On the arrival of the line carrier either on board the ship in distress or on the shore, it is drawn out of the water. If ashore, the person who receives it draws out the iron rod which maintains the vertical piece of timber on the horizontal one, and discloses a steel hammer weighing 3.5 kilograms (7.7 pounds) and an iron stake of the same weight, which are incased in the vertical timber. The stake is then driven into the soil, the towed line solidly fastened to it, and a connection is thus established between the land and the ship in distress.

The balloon float is provided externally with loops and strings, to which, in case of collision or foundering of the ship, 18 to 20 persons can cling and there wait for help. They may be carried to land by the balloon float.

On September 17 and 18, 1902, a small model apparatus drifted against the wind at an angle of 120° in the course of trials carried out in the roads of Royan in the presence of deputies and prominent persons.

During the trials which took place at La Pallice-Rochelle on the 19th of September, 1903, the inventor proposed to carry a rope from land to a ship in distress (a buoy was moored instead of a ship). The apparatus, set at 90° , was thrown into the sea from the north light-house at La Pallice, and, in spite of a contrary current of about

2 knots, passed within 6 meters (19.7 feet) of the buoy, at a distance of 400 meters (1,312 feet) from its starting point, making an angle of 90°, the time occupied being only thirteen minutes. The wind was light (6 meters, or 19.7 feet, per second) and east-northeast, while the direction taken by the apparatus was north-northeast.

Many prominent persons were present at this experiment and warmly congratulated the inventor.

The invention should prove to be a very useful one on account of its simplicity and practicability.

GEORGE H. JACKSON, *Consul*.

LA ROCHELLE, FRANCE, *November 9, 1903.*

PEAT COAL BY ELECTRICAL PROCESS.

(From United States Consul-General Mason, Berlin, Germany.)

The steadily growing consumption of fuel for the various purposes of manufacture, transportation, and domestic economy, with the gradual but inevitable exhaustion of firewood in most civilized countries, have combined to give during recent years a new and important interest to the utilization of the vast beds of peat which have hitherto lain almost neglected in many portions of Europe and America. Peat in its ordinary condition contains about 80 per cent of water. All the earlier methods of utilizing it involved the elimination of this by air drying, which is tedious and uncertain in wet, cloudy weather, and practically ceases in winter. The problem has been, therefore, to devise a process which would carbonize and convert the substance of peat into coke or coal by the consumption of its gaseous elements, a process which should be self-sustaining, simple, and so cheap in operation as to produce carbonized peat at a cost below or not far exceeding the average price of bituminous coal.

In a former report of this series (ADVANCE SHEETS No. 1615, April 8, 1903) an account was given of a German process by which peat is coked in retort ovens heated by the flame of the burned gases generated by the coking process itself. This method is practically self-sustaining, produces coke of high quality, and, aside from the difficulties of cutting and excavating peat under intense cold, can be worked during the winter in even an arctic climate.

The latest step forward in this branch of industry appears to have been made in England, where at the works of Messrs. Johnson & Phillips, at Charlton, in Kent, there has been exhibited during the past fortnight an electrical process for converting ordinary peat into firm, smokeless steam coal at a cost which promises to bring

the product far within the industrial price limit of steam fuel in Great Britain and Continental Europe. From the numerous and elaborate reports in the English press the following description of the apparatus employed and its method of operation has been derived.

The peat is cut and excavated by machinery, loaded into dumping cars which convey it from the bog to the plant, where it is packed into rotary iron cylinders of a peculiar construction. The cylinders being rotated at high velocity, the centrifugal pressure, aided by an interior beating device, expels all but a small remnant of the 80 per cent of water which the material originally contained. Electrodes connected by conductors with a dynamo are then inserted in the cylinders in such a manner that the mass of centrifugally dried peat becomes the medium through which is completed the circuit between the electrodes. The resistance offered by the peat, like the filament of an incandescent lamp, generates heat which carbonizes the material, producing a mass of disintegrated black globules, which retain all the valuable elements of the original material. This part of the process, which depends largely upon the conductivity of the peat, may be promoted by moistening the mass with certain cheap liquid chemicals, the use of which is covered by the patent.

From the cylinders the carbonized material passes to machines, which kneed it into a puttylike mass, which is then pressed into briquettes or left to dry and harden in masses, which are broken into lumps, screened, and graded like ordinary coal. Among the special advantages claimed for this method is the fact that the electrical current converts but does not destroy any of the valuable elements of the peat, whereas coking by fire heat expels a large percentage of these elements in the form of gases, which, being either wasted or burned as fuel beneath the retorts, are lost from the composition of the ultimate product.

Briquettes produced by this method can be compactly stowed on shipboard or elsewhere; they are practically smokeless, leave no clinkers whatever, and, according to English press reports, have the high thermal value of 9,000 British units. The cost of a plant capable of treating 100 tons of peat per day is stated to be £4,000 (\$19,466). The actual cost of producing 1 ton of peat fuel by this process is stated to be 5s. (\$1.21), equal for all steam-generating purposes to a ton of South Wales steam coal, which costs at the mouth of the mine 8s. 4d. (\$2.02). These are given as the economic results in a location where the electric current used by the process is generated by steam. In districts where generators can be driven within a working radius of peat bogs by water power, the cost of production would be proportionately reduced.

There are in New England and in the Middle and Western States vast beds of peat which have been heretofore left neglected as waste material in the economy of nature. In Alaska and on the islands which lie along its shores—where the limited supply of coal brought from British Columbia sells for \$20 per ton and men perish from cold for want of fuel—there is a practically unlimited supply of peat of the best quality, all of which would be available as fuel if carbonized and converted into coal or briquettes. No process which includes air drying or works the peat at ordinary temperatures would be practicable there for more than a small part of each year—the brief arctic summer of that northern clime. If those vast deposits of fuel material are ever successfully utilized, it must be by some process similar those herein described, whereby the peat is quickly machine dried by means independent of sun or wind and then carbonized by heat that can defy even the cold of an arctic winter. This electrical method will be first tried on an industrial scale in Ireland, an island which, with a total area of 32,393 square miles, has 2,830,000 acres of peat.

FRANK H. MASON,
Consul-General.

BERLIN, GERMANY, *November 10, 1903.*

SIBERIAN AND MANCHURIAN NOTES.

(From United States Commercial Agent Greener, Vladivostock, Siberia.)

MANCHURIA.

Russian settlements.—At nearly all the larger railroad stations in Manchuria Russian settlements have made their appearance. Besides railroad offices and houses for employees, there are also many private buildings. There is one impediment for the expansion of these settlements, viz, no regular sales of lots are yet arranged for. It is said, however, that there will be a regular auction sale of lots organized next year. In the meantime, private persons are allowed to occupy lots temporarily.

Russian coal-oil trade.—Noble Brothers have opened coal-oil storehouses at Harbin, Kuanchensa, and Mukden. They are going to erect large cisterns and keep in storage coal oil and naphtha products in all kinds of packages. The firm has acquired the necessary plots of land and will erect several brick structures.

SIBERIA.

Second Siberian railway.—A surveying party is now engaged in defining the route of the second Siberian railroad. The party will project the line in such a manner that instead of four daily trains of

20 cars each, nine trains of 36 cars each can run every twenty-four hours. For this improvement 10,000,000 rubles (\$5,150,000) are appropriated.

Railway to Peking.—The Irkutsk District Reporter states that the preliminary work for the railroad line from Kiakhta to Peking via Urga is accomplished and adopted. The work of building the new line, 990 miles in length, will be started in September, 1903.

Shanghai to Russia.—The sale of tickets in the form of coupon books for the journey from Shanghai and Nagasaki via Port Arthur by the Chinese Eastern Railroad and Russian railroads to the principal stations of the Russian Empire, and also from important stations of the Chinese Eastern Railroad, will commence on August 1/14, 1903. The coupon books will also be introduced for the trips from Vladivostock, Habarofsk, and Dalny to the same stations of the Empire via Manchuria. Buffet cars from Vladivostock will be run twice weekly.

R. T. GREENER,
Commercial Agent.

VLADIVOSTOCK, SIBERIA, *July 25, 1903.*

ECONOMIC IMPORTANCE OF THE COFFEE INDUSTRY.

The following article appeared in *El Cafetal*, New York, August, 1903:

The cultivation of coffee is a branch of tropical agriculture of greater importance and extent than the general public and the planters themselves can imagine. From the results of a careful compilation of statistics recently collated and published from various governmental and private sources for the period from 1900 to 1902, the following data are calculated:

The total number of coffee plantations in the world, large and small, but which can properly be classified as such in the full meaning of the word, reaches 49,000, distributed among the three coffee-producing continents—America, Asia, and Africa.

Their total annual production of coffee amounts to more than 21,500,000 bags, of an average weight of 134 pounds each, or 2,881,000,000 pounds.

This production represents a total value of more than \$255,000,000 annually contributed by the coffee industry to the world's trade and commerce. Such a grand total is realized by the annual net product of more than 1,800,000,000 coffee trees in full bearing.

The land used for coffee growing, exclusive of the area used for the production of other fruit in connection with coffee, exceeds 3,600,000 acres. The value of the property, including buildings, machinery, and other utensils, is more than \$1,350,000,000, based on the low values that have prevailed from 1900 to 1902.

The average total number of persons engaged during the year in planting, tending, harvesting, curing, and handling the crop, including office force, reaches 2,220,000 men, women, and children.

The total amount paid annually in wages and salaries to laborers and the office force, exclusive of interest on capital, taxes, etc., exceeds \$135,000,000.

Upon these data the following interesting average calculations are based:

The average area of each plantation exclusively devoted to cultivation of coffee is 73½ acres.

The number of coffee trees in full bearing is 36,735 for each plantation.

The average yield of raw coffee (en oro) is 1½ pounds per tree.

The average number of trees planted per acre is 500.

The average production of each plantation is 58,796 pounds of coffee.

The production per acre is 800¼ pounds.

The average number per year of laborers and other persons employed on each plantation is 45, or one for every 1⅝ acres under cultivation, or one person for 818 coffee trees, equivalent to one person for each 1,309¼ pounds of coffee produced and prepared.

The average annual salary paid to each employee is \$61.36.

The average cost of labor in the cultivation, production, and preparation of coffee is 4.7 cents per pound.

The average value of each coffee plantation, including the value of buildings, machinery, and other utensils, is \$27,551, or \$375 per acre.

The average return for each plantation through the sale of its entire product of coffee is \$5,204, or at the rate of 8¾ cents per pound of coffee.

BEET-SUGAR PRODUCTION AND CONSUMPTION.

Under date of October 27, 1903, United States Consul Walter Schumann, of Mainz, Germany, transmits the following estimated beet-sugar production of Europe, as compiled by the International Association for Sugar Statistics:

Country.	Plants in operation.	Production.	
		1903-4.	1902-3.
	<i>Number.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>
Germany	384	1,803,160	1,750,670
Austria	215	1,116,500	1,050,900
France	296	757,000	823,600
Belgium.....	100	215,300	200,000
Holland.....	29	129,300	102,300
Russia.....	275	1,103,000	1,169,600
Sweden.....	16	110,795	73,400
Denmark	7	51,800	37,067
Total	1,322	5,286,855	5,207,537

WORLD'S SUGAR PRODUCTION AND CONSUMPTION.

A pamphlet recently published by Sir Neville Lubbock gives the following statistics of the world's production and consumption of sugar, beet and cane:

PRODUCTION.

Country.	1901-2.	1902-3.
	<i>Tons.</i>	<i>Tons.</i>
Europe (beet), except Russia.....	5,722,000	4,390,000
Russia (beet).....	1,099,000	1,215,000
British colonies.....	545,500	513,000
Egypt.....	96,000	90,000
India.....	3,000,000	3,000,000
United States, Cuba, Porto Rico, Manila, and Hawaii.....	1,804,500	1,920,000
Peru, Argentine Republic, Dominican Republic, Mexico, and Brazil.....	738,500	582,500
Java.....	767,000	842,500
French colonies.....	110,000	104,000
Total.....	13,882,500	12,657,000

CONSUMPTION.

Of the foregoing India and Russia will consume their own product; the United States will consume its own product and that of Cuba, Porto Rico, Manila, and Hawaii; Europe will consume 2,656,000 tons and 2,750,000 tons of its own beet-sugar production for the years given. This leaves available for the United Kingdom and other countries the following amounts:

Product of—	1901-2.	1902-3.
	<i>Tons.</i>	<i>Tons.</i>
Europe (beet).....	3,066,000	1,640,000
British colonies.....	545,500	513,000
Egypt.....	96,000	90,000
Peru, Argentine Republic, Dominican Republic, Mexico, and Brazil.....	738,500	582,500
Java	767,000	842,500
French colonies.....	110,000	104,000
Total.....	5,323,000	3,772,000

NOTES.

Absence of American Ships from West Coast of Africa.—During the month of September, 1903, 22 steamships called at the port of Monrovia, of which number 15 were German, 5 English, and 2 French; 11 were homeward and 11 coastward bound. The entire absence of American vessels from this part of West African waters is to be deeply deplored.—*Ernest Lyon, Consul-General, Monrovia, Liberia, October 30, 1903.*

American Farm Implements in Austria.—American farm machinery does not find a ready sale here. Cheap labor, small farms, and the stony and hilly character of the land render the employment of machinery unprofitable, and sometimes impossible. But I am satisfied that many of our farm and garden tools could be successfully introduced if systematic efforts were made by our manufacturers to bring them to the general attention of Austrian farmers and gardeners. Dealers will not, as a rule, import an article unless a demand for it has first been created.—*Fredk. W. Hossfeld, Consul, Trieste, Austria, October 31, 1903.*

American Trade in Denmark.*—Trade relations with the United States are very cordial. Denmark buys a great variety of articles from us yearly and would buy more in various lines if our exporters and manufacturers were as active in catering to the market as are the Germans. Where there is one American merchant or his representative visiting Denmark there are several Germans, and trade will go largely to those who seek it. The Germans are exceedingly active in Denmark and find a market for their wares by simply "hustling."—*Raymond R. Frazier, Consul, Copenhagen, Denmark, November 1, 1903.*

French Cattle for the United States.—Attention has often been called to the Limousin cattle, there being no breed known that is so well adapted for beef as the hardy native Limousin stock. They far outrank the Durham, or any other breed, for this purpose. This breed is particularly robust, easily nourished and fattened, and has all the prime characteristics for producing first-quality beef. If these cattle were imported into the United States and crossed with

* Extract from Consul Frazier's annual report, which will be printed in full in *Commercial Relations* for 1903.

the native stock they would improve the quality and be a great benefit to the producer. There is a registered herd book, and all information can be easily obtained.—*Walter T. Griffin, Commercial Agent, Limoges, France, October 28, 1903.*

Market for Toilet Soaps in China.—A French consular report from Shanghai states that a large demand exists there for cheap toilet soaps. French, German, and some Austrian firms have secured a good market for such goods by a close study of the Chinese taste. The soaps are wrapped up and labeled in French, as, for instance, “Savons à la Rose de Chine,” “Reine des fleurs,” etc. The only competitors of the French, German, and Austrian manufacturers worth mentioning are Colgate & Co. and an English house.—*Richard Guenther, Consul-General, Frankfort, Germany, November 5, 1903.*

American vs. German Washing Machines.—Under date of November 4, 1903, United States Deputy Consul-General S. W. Hanauer, of Frankfort, Germany, transmits the following translation of a paragraph from the last annual report of the Berlin Chamber of Commerce:

The demand for washing machines has largely increased in recent years. Steam laundries for hotels, hospitals, and for private use are springing up everywhere. In foreign markets the German washing machines have to meet American competition, but have the satisfaction of maintaining the field. The German machines, though higher in price, are popular because they are more strongly built and easier to manage than the American article.

American Steel Rails for Turkish Railroads.—Under date of November 14, 1903, Mr. C. M. Dickinson, United States consul-general at Constantinople, says:

Mr. J. C. Turk, of the Pennsylvania Steel Company, who has been here since the 7th of September with plans for a new iron bridge across the Golden Horn, was to-day awarded the contract for 20,000 tons of steel rails, fish plates, and bolts for the Hedjaz Railway, he being the lowest bidder among Belgian, German, and other competitors. These rails will lay about 600 miles of the new railway from Haifa to Mecca. Mr. Turk hopes to secure the contract for the new bridge. The project has been under consideration for nearly two years and the bridge builders of other countries are competing for the work.

Austrian Complaints Regarding American Cotton.—The complaints about the inferior packing and slow delivery of American cotton continue. Spinners assert that loose baling and exposure to rain cause the fiber to deteriorate, and that such deterioration also increases the danger of spontaneous combustion and leads insurance companies to charge higher premiums in consequence. The fact that American cotton ordered in August often does not arrive at Trieste before December certainly militates against our trade. The delay is due, however, to the slow and irregular steamship communication between our cotton ports and Trieste rather than to any negligence on the part of the American exporter.—*Fredk. W. Hossfeld, Consul, Trieste, Austria, October 31, 1903.*

American Trade in Wurttemberg.—Statistics as to imports into Wurttemberg are not collected. The large importing houses in Berlin and Hamburg have direct trade relations with the United States and distribute, in great part, the imports from that country throughout the German Empire. It would undoubtedly be advantageous to our exporters if they would establish the system of thoroughly canvassing this country with skilled commercial travelers conversant with not only the language, but also the trade conditions here; a system long since adopted by the German manufacturers in foreign markets, and which has, perhaps, as much as any other factor contributed to their commercial success.—*Edward H. Ozmun, Consul, Stuttgart, Germany, October 23, 1903.*

Rouen-American Trade.—It is interesting to note the increased activity of Rouen trade relations with the United States. By the modest efforts of this consulate American goods are becoming more generally known in this district. There has been a decided augmentation in the sale of American dried fruits of late. Refrigerators, ice-cream churns, and oil stoves are finding sales. The following articles can not be found in this city of more than 150,000 inhabitants: Chewing gum, canned oysters, grits, laundry machinery, molasses, canned corn, sweet potatoes, rubber stamps, barber chairs, spring window shades, and lamps. The exports from this district to the United States have trebled within the last two years. They were, for the last four quarters, respectively, \$54,025, \$75,609, \$83,536, and \$99,134. The increase is mostly in hatter's fur, rabbit skins, and paper stock.—*Thornwell Haynes, Consul, Rouen, France, October 30, 1903.*

Electric-Light Engine Wanted.—The electric-light company of Teneriffe, Canary Islands, is desirous of purchasing an American electric-light engine of at least 500 horsepower, as with the machinery they now have they find it impossible to meet the large and constantly increasing demand for electric light. The engine required must be of the latest pattern, of first-class material, and up to date in all respects. Price should be quoted c. i. f. Teneriffe. The following firms issue through bills of lading at Teneriffe: Elder, Dempster & Co., Produce Exchange, New York, and J. M. Ceballos & Co., Wall street, New York. Quotations and all communications should be addressed to Señor Don Nicolas Marti, presidente Compania Electrica e Industrial, Teneriffe.—*Solomon Berliner, Consul, Teneriffe, Canary Islands, December 1, 1903.*

Fighting the German-American Petroleum Company.—Under date of Frankfort, Germany, November 3, 1903, Deputy Consul-General S. W. Hanauer states that the last annual report of the Chamber of Commerce for the city and district of Leipzig contains the following:

The director of the royal railroads of Saxony asked for the opinion of this chamber of commerce as to the petition addressed to said director by commercial circles of Saxony praying that the German-American Petroleum Company, of Bremen, be not permitted to erect petroleum tanks on fiscal territory—*i. e.*, railway stations. This chamber, while admitting that the consumer of the oil may be benefited by the erection of such tanks, shares the fears of the petitioners that such arrangement of tanks would do away with the wholesale and retail dealers in the oil; besides this, experience leads to the belief that the petroleum company would eventually use its power to the disadvantage of the consumers. The chamber therefore recommended that the said petroleum company be refused permission to erect stationary tanks on State property.

Practical Introduction of American Machines.—As showing a tendency to accept any marked American improvement, even in conservative France, the proprietors of a paper plant at Rives, in the Isère, have recently contracted with an American inventor for the control of a patent covering a machine for the quicker and more economical drying of paper. The inventor, a practical engineer, has been on the ground explaining and proving the superiority of his machine—a method which seems to be the most successful for the introduction of new trade and even for the enlargement of trade already established. This same inventor has in a short time succeeded in disposing of the rights to manufacture his machine to special paper manufacturers in England, Germany, Holland, Sweden, Switzerland, Austria, and Russia.—*C. P. H. Nason, Consul, Grenoble, France, November 2, 1903.*

American Trade Opportunities in Spain.—In his annual report, which will be printed in Commercial Relations for 1903, United States Consular Agent Faustino Odriozola, of Santander, Spain, October 16, 1903, says:

Most of the Spanish railways need the immediate renewal of their rolling stock—locomotives, passenger and freight cars, etc. Some of them—the Santander-Bilbao Railway, for instance—have made satisfactory arrangements for such renewal with American manufacturers, but the most of them draw their supplies from the north of Europe. The establishment in Spain, especially in the north of Spain, of agencies of American manufacturers, which would not only profit by opportunities constantly offering for trade, but which would make those opportunities, is the one thing needed to enable us to win our full share of Spanish trade now held by European manufacturers simply because they are on the ground ready to meet all the wants of the consumers.

New Steamship Service from Austria-Hungary to United States.—The Cunard Steamship Line has made an arrangement with the "Adria," a local Hungarian shipping company, whereby the Cunard Line is to run vessels from Fiume to the United States for the transportation of emigrants.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, November 18, 1903.*

American Fruit in Germany.—The present year has witnessed a great increase in the imports of American apples into Germany. For the first eight months of 1903 the imports were 3,696 metric tons of 2,204 pounds each, against 214 tons and 543 tons during the same months in 1902 and 1901. Of American dried fruit, baked and simply preserved, the German imports for the same period were 25,251 tons, against 11,981 and 12,060 tons, respectively, in 1902 and 1901.—*Richard Guenther, Consul-General, Frankfort, Germany, October 16, 1903.*

Agricultural Machines in Russia.—The Austrian consul-general at St. Petersburg has submitted to his Government a lengthy report on Russian importation of metallic wares, machinery, etc. He says the use of and demand for agricultural machines is steadily increasing in that Empire. Their domestic manufacture is also increasing. Last year's importation of plows (of which 90 per cent was from Germany) were valued at 2,700,000 rubles (\$1,390,500).—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 26, 1903.*

Calais Lace for the United States.—The exportation of machine-made lace, the manufacture of which is the principal industry of Calais, is ever increasing in importance. For the fiscal year ended June 30, 1903, \$4,177,900 worth of lace has been declared at this consulate for exportation to the United States, showing an increase over the preceding fiscal year of about \$60,000. It can be safely asserted that more than \$5,000,000 of lace goods paying 60 per cent duty are exported from Calais to the United States annually. All the goods of this class are not declared for exportation at the Calais consulate.—*James B. Milner, Consul, Calais, France, October 31, 1903.*

French Complaints as to American Fish Cans.—American canned salmon and lobsters, canned meats, California canned fruits, etc., are, of course, staples of the grocery trade in France, but there might be a much larger sale, particularly for canned lobsters and salmon, if those products were energetically pushed by traveling salesmen. In this connection the attention of American canners is called to the fact that complaints are frequently heard here of the inferior and unsuitable cans in which our salmon and lobsters are packed. It is said that these cans are made from tin plate containing too much lead, and that, in consequence, their contents are poorly preserved. Often it is said the taste of the lobsters is affected and, in some instances, quite spoiled. I know nothing personally as to the merits of these complaints, and only call attention to them for the benefit of our canneries.—*Benjamin H. Ridgely, Consul, Nantes, France, October 1, 1903.*

American vs. Russian Petroleum in Greece.—Referring to Minister Jackson's dispatch of August 11,* I have the honor to report that in the official test of the petroleum to be used by the Greek Government the Russian article appeared to be superior in quality to that of either the United States or Roumania. The price also (4.35 francs, or 83.9 cents, per case) was by far the lowest, being nearly 1.50 francs (29 cents) less than that of the American petroleum. As a result of this test the Greek Government has ordered 60,000 cases of Russian petroleum, of which a trial will be made before entering into any definite contract. I understand, however, that this is merely a formality, as it has already been practically decided to close the contract with the Russian company.—*Charles S. Wilson, Chargé d'Affaires ad interim, Athens, Greece, November 3, 1903.*

* Printed in ADVANCE SHEETS No. 1726 (August 18, 1903).

American Fruit in Saxony.—According to the report of the Leipzig Chamber of Commerce American fruits, especially California dried fruits, play an important part in the Leipzig market and throughout Saxony. California prunes and apricots of last crop were excellent in quality. There were general complaints against the abrupt action of the police and other administrative authorities against dealings in these articles on the alleged ground that the sulphuric acid contained therein was injurious to health. American evaporated apples are becoming more popular year by year; their quality is excellent and they are sold in large quantities in the markets of Germany. However, it is desirable that they be packed in boxes giving 25 kilograms (55 pounds) net weight of fruit, as is the usage with the California fruit packers.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, November 3, 1903.*

Warning to Swiss Americans Returning to Switzerland.—The attention of students and others intending to remain for any length of time in Switzerland is called to the necessity of providing themselves with passports. Many naturalized American citizens who were formerly Swiss citizens labor under a misapprehension as to their old and new citizenship rights and responsibilities. They return to Switzerland with naturalization papers or passports only to find themselves Swiss citizens again. In this country a person never loses his citizenship, no matter how long he may absent himself, unless he goes through certain necessary formalities. If he returns and is owing a military tax he is compelled to pay the same in spite of the fact that he is an American citizen. The only way to be released from old responsibilities is by making a written request to his home community for such release, submitting proof at the same time that he has acquired American citizenship.—*A. Lieberknecht, Consul, Zurich, Switzerland, November 4, 1903.*

Building Locomotives in Germany from American Models.—The Bavarian government has decided to construct a large number of new locomotives upon the models of the American locomotives introduced by the railways of Bavaria nearly four years ago. During the next two years 40 locomotives of Class B, 18 of Class C, and 12 of Class D are to be replaced by 70 new locomotives, and 5,000,000 marks (\$1,190,000) are to be expended for this purpose. The two locomotive factories in Munich, the large establishment of Maffei, as well as that of Kraus, are to be favored in the distribution of these contracts. It is hoped at this consulate-general that American loco-

motive builders will not lose this opportunity to secure renewed orders in Germany, since their locomotives have become the type for those about to be introduced and have proven, after due trial, the most approved models.—*J. H. Worman, Consul-General, Munich, Germany, October 31, 1903.*

Opening for Machinery in Australia.—The Canadian commercial agent at Sydney, New South Wales, reports the extraordinary success of artificial irrigation on comparatively small areas of land, and predicts for it a great future. The prospects for selling pumping machinery, motors, and other power generators—as, for instance, windmills and steam, oil, and hot-air machinery—are very good. It would be advisable to sell such machinery through agents who understand how to put it up. Some firms that sell that class of machinery for certain manufacturers could be induced to take hold of new ones, if good and cheap. It would be necessary to send a competent expert and put up some sample machines, in order to prove their efficiency.—*Richard Guenther, Consul-General, Frankfort, Germany, November 7, 1903.*

American Competition in Germany.—Commercial Intelligence, an English trade journal, says:

While it is true that considerable apprehension has been shown by manufacturers in the United States in regard to the advent in America of German competition in iron and steel work, it also appears that the iron and steel producers of Germany are somewhat anxious concerning the probability of American works offering severe competition in Germany at an early date. To dissipate this anxiety, the German Government has now issued a statement in the *Nachrichten für Handel und Industrie* which points out that an inundation of the German market with cheap American productions presupposes that the American iron industry can produce at less cost than the German. This, it is added, is by no means correct with regard to the pig iron for the manufacture of steel. The cost of producing a ton of Bessemer pig iron at Pittsburg, even for the United States Steel Corporation, amounts to not less than 50s. to 52s. (\$12.15 to \$12.64), while in the case of works less favorably situated the cost can not be less than 60s. (\$14.58) per ton. Only in the case of extraordinary high prices are the American works able—and especially the Steel Corporation—to earn dividends and interest and obtain surpluses for improvements and reconstruction of plant and equipment. Thus, under present conditions, it would only be possible to export American productions to Germany at the actual cost of production, but while present prices prevail such exports could hardly take place. In the case of pig-iron steel, semifinished steel, rails, sheets, etc., the statement avers that the American cost of production can scarcely be reduced any further, as the labor item of these expenses no longer plays any part, owing to automatic working operations.

Popularity of American Goods in England.—United States Consul F. B. Keene, of Florence, Italy, under date of October 17, 1903, sends a translation of part of an article which appeared October 17 in *Il Corriere Italiano*, one of the leading papers of Florence. The article is based upon a diagnosis of England's condition, by Mr. MacKenzie.

Mr. MacKenzie, making a diagnosis of the ailment of his country, has written the following suggestive sentence:

The Englisman in easy circumstances, on rising in the morning, shaves himself with Williams' soap, with a safety razor of Yankee make. He puts on North Carolina stockings and shoes from Boston, and throws over his shoulders suspenders from Connecticut. Into his pocket he puts a Waltham or Waterbury watch, and sits down to his "dejeuner." He congratulates his wife on having a corset from Illinois and a bodice that comes from Massachusetts. He eats bread made from American flour ground in the mills of the Great Lakes. He eats bacon from Kansas City and oysters from Baltimore, while his wife cuts a beef tongue from Chicago. And while eating his luncheon he reads his paper, printed by an American machine on American paper with American ink, and probably edited by some lively journalist from New York.

Spanish Hematite Ore for the United States.—A vein of hematite iron ore, rich in the quality necessary for making red paint for structural ironwork, has been discovered near the city of Jaen, in the Province of that name, which has been worked during the past year and much of the output has found ready sale in the United States. A reported marked decrease in the output of ore of this class in the United States has probably stimulated the interest of American paint manufacturers in the Malaga product—so much so, in fact, that an eastern State paint firm seriously contemplated the purchase of an interest in the mine. Failure to reach a satisfactory agreement with the local owners has, it appears, checked the deal. It seems hardly probable, however, that the original plan will be carried out. This contemplated the formation of an American corporation which would control the output of the mine. The present outlook is that this idea has been abandoned and that the matter will result only in an additional quantity of ore being supplied. The mine is 100 miles from Malaga, but the ore is brought here by rail and prepared for shipment, both in its crude state and refined, at a plant on the outskirts of this city.—*D. R. Birch, Consul, Malaga, Spain, October 21, 1903.*

Consumption of Smoke.—A Hungarian inventor claims to have solved the smoke difficulty by employing porous plates or bricks made of a composition containing lime and fuel of different degrees of combustibility arranged behind or between portions of the fuel in

a furnace. These serve as desulphurizing or purifying filters for the furnace gases. A suitable combination of materials is 10 to 15 parts of sawdust, 30 to 35 parts of coke or anthracite, 20 to 25 parts of coking fuel, and 30 to 35 parts of brown coal and peat, mixed with 6 to 20 parts of caustic lime, tempered with an amount of water equal to the weights of the combustible materials taken together.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 16, 1903.*

Airship Competition.—United States Consul J. C. McNally writes from Liege, Belgium, under date of November 27, 1903, to say that the authorities of the universal exposition, to be held in Liege in 1905, have decided to offer a prize of \$19,300 for an airship competition to be held in connection therewith. The details of the contest are now under consideration.

Artificial Camphor.—Mr. E. Callemberg, of Lank-on-Rhine, has succeeded in preparing, on a commercial basis, pure chlorhydrate of terebinth, commonly known as “artificial camphor,” and has found that this pure body has many valuable properties. It is soluble in nitroglycerin, diminishing greatly the maximum temperature reached during explosions, hence it may prove useful in the manufacture of safety explosives. It further lowers the freezing point of nitroglycerin to a very marked degree, a solution containing from 3 to 5 per cent of the chlorhydrate solidifying at 10° to 15° C., the product being a gelatin dynamite of improved quality, while the pure solvent in nitroglycerin dissolves in the cold every kind of gun cotton, including the so-called insoluble varieties. According to La Nature, the chlorhydrate has also proved useful in the manufacture of explosives containing nitrate of ammonia.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, October 26, 1903.*

Interesting Experiments with Radium.—A correspondent of the Frankfurter Zeitung writes to that paper from London, under date of November 27, that Sir William Ramsey, the noted chemist, in a lecture on November 26, stated that the metal radium can change into helium. The heavy gas emitted by radium shows at first in the spectrum analysis the lines of radium; the spectrum of the gas, however, if inclosed in a tube, gradually changes till the distinct spectrum of helium becomes visible. The changing process

begins on the fourth and ends on the twelfth day. It has, therefore, been observed for the first time how one element changes into another. Professor Ramsey expressed the opinion that all elements perhaps change slowly, but that man does not live long enough to observe the change. Sir William Ramsay and the chemist Soddy are now examining more minutely how much helium can be formed from radium and how long the changing process lasts.—*Richard Guenther, Consul-General, Frankfort, Germany, November 28, 1903.*

New Damask Jacquard Loom.—A Finnish inventor has designed a mechanical damask Jacquard loom effecting the same saving of pattern cards, pattern drawings, and work, without the employment of so-called “forward healds,” as is obtained in the ordinary damask-weaving looms operated by hand. Another advantage claimed for this invention is the possibility of producing an almost unlimited number of large patterns. It consists in the arrangement of a number of wires or hooks for every needle corresponding with the number of threads desired in a warp unit. These wires or hooks are acted upon by lifting blades, the position of which is adjusted by cam grooves round a cylinder, the cam grooves being arranged in such relation to the speed of the cylinder that the required binding or combination is determined by the adjustment of the wires affected by the blades, so that those rows of wires which are to remain down are moved out, while others which are to be raised are not affected, and this whether the wires or hooks are pressed back by the pattern cards or not.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 4, 1903.*

Lustering Fabrics.—Since the recent rapid development of mercerization the process has found many applications in lustering yarns and fabrics. On fabrics, however, the luster has not been obtained, except upon printed spots, and it is much impaired by the necessary use of thickening. The object of the present invention, says the *Moniteur de la Teinture*, is to produce a maximum of luster on unbleached fabrics by an opposite method, viz, by retaining at the printed places the dull appearance of the unbleached fabric and lustering the unprinted places in a mercerizing bath. The fabric having been printed with a varnish unacted on by caustic soda is mercerized when the varnish is dry. The caustic-soda lye used is of different strengths, according to the composition of the fabric,

and the time of immersion depends on the same. The fabrics are then rinsed, dried, and passed through a benzine bath to dissolve and remove the varnish. The unprinted places then appear with a luster greatly enhanced by contrast with the dullness of the printed spots and the fabric has a real character of novelty.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 4, 1903.*

Rolling and Straightening Apparatus.—An apparatus patented by a native of Düsseldorf for receiving, cooling, and transporting bars after they have passed through a rolling mill, or straightening apparatus, consists of two fixed rails, on which the bars rest and are moved forwards step by step by means of a long carriage mounted on wheels between the fixed rails. The carriage is reciprocated by a rack and pinion, and fitted with pawls which catch on the rails in the forward movement, but turn down and pass under the rails in the backward movement. When bars have to be removed from a straightening apparatus with a hydraulic cylinder, the receiving end of the carriage is bent downwards, in order to lift the bar over the straightening bench. The intervals between the ends of the rails facilitate cooling. A rotating cylinder at the delivery end of the table discharges the bars to one side.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, October 26, 1903.*

New Incandescent Electric Lamp.—A new electric lamp (Boem's patent) consists of an incandescent body, requiring preliminary heating to render it conductive, and an electric heater. At starting these are connected in parallel, but are afterward placed in series, so that the heater serves as a resistant to limit the current taken. The heater may be placed within a tubular incandescent body or may itself be luminous; it may be a carbon filament, the lamp being fitted with a closed bulb, which is either exhausted or contains an inert gas. The change of connections may be effected by a hand or automatic switch. Two or more incandescent bodies may be arranged in one lamp for use simultaneously or successively. In one arrangement described two incandescent rods are surrounded by heating coils operating independently; at the middle of the lamp one end of each rod is permanently joined to a supply wire, and one end of each heater to the other supply terminal; the other ends of the rods and heaters are connected with coiled springs, which, when cold, touch contacts connected with the supply terminals, so that

the rods and heaters are connected in parallel, but when the springs are heated they touch one another and connect the outer ends of the rod and heater at each side of the lamp, so that these are then in series.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, October 23, 1903.*

Improvements in Lord Kelvin's Compass and Sounding Machine.—Several improvements in the design and construction of Lord Kelvin's patent compass and sounding machine have just been introduced. In the newest form of the compass the illumination is effected from below, and either oil lamps or electric light may be used. The bottom of the compass bowl is in the form of a strong, thick lens, through which the light is refracted on the card. The intensity of the light may be varied at the pleasure of the observer, and this is found to be exceedingly useful in taking bearings of stars or other faint lights. A new antivibrational suspension has been designed, which insures great steadiness in the card; and a new form of helmet, with rifle sights, facilitates very considerably the work of taking bearings. With the new helmet navigators are able to take bearings of lights and stars by night with the same ease and convenience as bearings of the sun are now taken by day. The new form of sounding machine has been constructed of a height which has been found, from practical experience, to be the most suitable for the work of winding in the line. In addition to this great advantage, the new machine has an improved form of brake action, and a further advantage is that the working parts of the machine are all in sight and can be easily removed if necessary.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, October 26, 1903.*

Indigo Printing.—A German firm has patented the application of the old-established resist pastes customary in frame dipping (that is, copper salts in conjunction with gum, china clay, sulphate of lead, soluble lead, or zinc salts) to glucose-prepared cloth, with the object of resisting indigo printing pastes and hereafter exerting a further action in the vat. Thus, if the print be machine padded with indigo, aged, and dipped, effects will be got on a material, showing a different depth of color on the face and the reverse side. A practical objection to this process, says Mr. E. C. Kayser in the *Textile Recorder*, is that these resist pastes, in order to be effective, demand much deeper rollers than those currently used in calico printing, unless, indeed, peroxide of lead, recently introduced as reserve—which also destroys glucose—should be found serviceable. If the style be otherwise desirable, it could presumably be produced

with less difficulty by covering or machine padding light blues and then printing in bichromate; or, better still, light blues could be pasted together back to back with flour paste, dipped again, and thereafter printed in bichromate.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 3, 1903.*

Von Bauer Coke Oven.—The Von Bauer coke oven (a battery is at work at one of Krupp's collieries in Westphalia) is a variant of the vertical-flued horizontal oven and, besides some ordinary points of similarity, resembles the Brunk oven in having the heating system of one end separated by a parting wall from the heating system at the other end; but here ends all similitude. The Von Bauer oven has a simple vaulted substructure, with a simple set of alternately wide and narrow longitudinal cooling channels, separated by thick walls, but connected by transverse ducts. Upon these walls are built the walls of the coking chambers, which are constructed with three sets of vertical flues or passages, the outer ones serving for combustion chambers and the inner set for the air supply. Under the coking chamber and over the wider cooling channels there is the usual longitudinal vaulted combustion chamber, but divided transversely by a wall at the center, and it only connects with the group of side flues near the center, there being no connection between this bottom chamber and the three groups of flues near the ends. But this chamber is in direct communication with the waste-gas main at either end. The air passages communicate with the combustion flues at prearranged spots by means of small orifices, so that air is admitted exactly where required. The combustion flues unite in an upper longitudinal flue, those at one end being separated from those at the other end by a central wall; and, moreover, by means of intervening walls in this longitudinal flue, they are subdivided into two groups, at each end, of four flues.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 6, 1903.*

New Waterproof Cloth.—It has long been the practice to regard some solution of india rubber as essential to cover the cloth that is used for waterproof garments, but it appears that a rival to india rubber has just entered the field. "Shower-proof" cloth is known as that which repels water very largely and yet remains porous, appearing in all respects exactly like ordinary wettable cloth. The methods of treatment of such cloth are often trade secrets, and even the patent specifications do not divulge all that must be done to achieve a satisfactory result. Petroleum says that the oil to which

that paper owes its name is one of the most successful shower-proof preparations. It says that the only reliable shower proof is obtained by impregnating the cloth outside and in with a fine film of waxes. Paraffin wax is the staple, but owing to its low melting point it is not fit for use alone. The composition used is so alloyed with other waxes and chemicals that at the boiling point of water the wax stands firm. A rather elaborate preparatory form must be gone through, and after the wax has been applied a finishing process is required. The interesting fact remains that it is petroleum that keeps out the wet. In tailors' windows many aquatic displays have been arranged to show that cloths can mysteriously be made to exhibit the power of the duck's back. Wool, cotton, silk, linen, velvets, braids, and even sails, awnings, and tent cloths are thus wrapped in an invisible film of rock oil.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 4, 1903.*

Austrian Rice for Horse Feed in the United States.—A considerable quantity of granulated rice and rice flour was exported from Trieste to New York and Philadelphia during the past year. This article is laid down in the United States at from $1\frac{1}{4}$ to $1\frac{1}{2}$ cents per pound, and is said to be used for horse feed in the Eastern States.—*Fredk. W. Hossfeld, Consul, Trieste, Austria, October 31, 1903.*

Austro-Hungarian Commercial Committee in Mexico.—Das Handels-Museum says:

In October of the present year an Austro-Hungarian commercial committee, consisting of Austrian citizens, was formed in Mexico. The honorary president of the committee is the Austrian ambassador. The committee has undertaken the furtherance of trade between Mexico and Austria by imparting information of all kinds and by aiding or directing persons coming from Austria to Mexico. The committee will aim to build up a direct exportation of Mexican products to Austria instead of through Hamburg, and will include such products as hemp, rice, dye-woods, cabinet woods, minerals, vanilla, rubber, hides, tobacco, coffee, tanning stuffs, and citric acid.

Austro-Germanic Electric Trust.—A fusion has taken place between the different electric companies of Austria and Germany. The Schuckert Company, of Nuremberg—which was one of the largest industrial enterprises for electricity in Europe, and maintained its branches not only in various cities of the Empire, but also in Austria, with headquarters in Vienna—effected early this year a union with the Siemens & Halske Company, of Berlin, and now a fusion has taken place between the Siemens & Halske Company and

the Austrian Schuckert works, so that it may be said that there is at present one trust controlling the trade of both Germany and Austria, for it is proposed to bring under the control of this new combination all the enterprises for electricity in Austria and, of course, in turn, in Germany under one general trust. The capital of this new trust, as far as it covers the control of Austria, is estimated at 18,000,000 crowns (\$3,654,000).—*James H. Worman, Consul-General, Munich, Germany, November 5, 1903.*

British Agriculture.—The following is an extract from the annual report—which will be published in full in Commercial Relations for 1903—of United States Consul H. W. Metcalf, Newcastle-on-Tyne, England.

The present year has been disastrous to the farmers of England, owing to the excessive rainfall. Country Life remarks:

It is to be feared that the country has scarcely yet begun to realize the grievous nature of the calamity that has fallen upon our rural districts. Battle and pestilence force people to give them their attention, and there are many other mishaps and misfortunes over which an uncontrollable agitation would be raised, simply because their effects are open and visible; but the destruction of our crops has been accomplished without any picturesque surroundings. It is nature's way of doing things silently and slowly. During the past nine or ten months ruin has been deliberately prepared for the British farmer. No such year as the present abides in the memory of men.

Influence of Automobiles upon Country Life.—One of the points of interest in the motor-car or automobile development is the fact that there is a tendency by people who have fine country houses for sale to advertise them in first-class motor-car journals, the increase of these advertisements indicating not only that the class of periodicals mentioned may become the natural medium for such advertisements, but that the facilities offered by up-to-date automobiles for traveling long distances quickly and easily and without regard to fixed time-tables, increasing the radius of a neighborhood and possibilities of combining with country life a command of city conveniences through accessibility to them, are making country houses more valuable.—*Marshal Halstead, Consul, Birmingham, England, November 13, 1903.*

Reforestation in England.—The Gardeners' Magazine, in advising those who are interested in an important movement which is receiving much support—the rebeautifying of what is known as the Black Country by clothing again the enormous areas of coal and iron pit waste and furnace refuse with trees—states that the best course of procedure is to sow the seed broadcast where trees are

desired and leave to nature the task of thinning out the "weakly examples." "Seedlings" will push down their roots among the débris in a manner that but few transplanted trees will do, and if they are unable to find the material wherewithal to build up tall, stout trunks they will become sufficiently developed to cover the unsightly wastes with verdure and thereby improve the appearance of the landscape. The poplar, the willow, the ash, and the sycamore are especially recommended, and of these the last two are of the greatest economic value, because of their suitability for timber supports of small sizes for use in mines, for which there is invariably a strong local demand.—*Marshal Halstead, Consul, Birmingham, England, November 14, 1903.*

Metal-Mine Output of Ontario.—Under date of December 8, 1903, United States Consul M. J. Burke, of St. Thomas, Canada, reports the output of metalliferous mines and works in the Province of Ontario for the first nine months of 1903 as follows:

Mineral.	Quantity.	Value.
Gold .....ounces...	7,693	\$139,210
Silver.....do.....	19,549	10,124
Iron ore.....tons...	262,408	376,103
Pig iron.....do.....	59,783	1,051,940
Nickel.....do.....	5,393	2,115,957
Copper .....do.....	3,911	330,263
Zinc ore.....do.....	950	7,600
Total.....		4,031,197

Imports at Santiago de Cuba.—Under date of October 20, 1903, United States Consul R. E. Holaday, of Santiago de Cuba, transmits the following statement, showing the value of the imports at Santiago de Cuba during the quarter ended September 30, 1903, and amount of duty paid thereon:

Whence imported.	Value.	Duty.	Whence imported.	Value.	Duty.
United States.....	\$432,174	\$76,817	Uruguay	\$3,118	\$1,148
Spain	260,893	64,428	Holland	3,656	698
England.....	202,583	61,112	Denmark	5,854	861
Venezuela.....	161,641	13,518	Dominican Republic.....	3,040	287
France	36,801	11,751	Austria	1,091	323
Germany	42,141	11,155	Italy.....	302	36
Mexico	13,711	1,368	Jamaica	135	58
India	31,740	6,117	Belgium.....	1,243	387
Haiti	23,343	1,568	Norway	555	37
Nova Scotia.....	25,140	3,175	China	608	266
Porto Rico.....	16,607	988			
Switzerland	6,979	1,148	Total	1,273,255	257,442

Lard in Cuba.—Under date of December 3, 1903, the Secretary of State advises the Secretary of Commerce and Labor that the United States chargé d'affaires at Habana reports that the Cuban Government does not contemplate prohibiting the importation of compound lard. The chargé states, however, that the Cuban health department has recommended that all manufacturers be compelled to mark, in Spanish, each package, roll, or vessel containing compound lard with the words, "No es manteca de cordo"—*i. e.*, "Not hog's lard."

Railways, Mines, Agriculture, and Manufactures in China.—Under date of October 2, 1903, United States Minister E. H. Conger forwards from Peking translations of two imperial edicts, both dated September 26, 1903, relative to railway, mining, agricultural, and manufacturing companies in China. The tenor of the first edict is as follows:

The board of commerce has memorialized, proposing that railway, mining, agricultural, and manufacturing companies should be established in all the Provinces, and praying that orders be given to the Tartar generals, viceroys, and governors of the Provinces to consult together and devise appropriate measures for the encouragement of commerce, which is our present concern. All depends upon the union of officials and merchants and their animation by a common spirit of mutual trust and confidence. The central and provincial governments should combine their strength to give assistance and seriously urge the matter far and wide, so that in time we may hope for improvement. Let the Tartar generals, viceroys, and governors of the various Provinces consult with the board of commerce and establish three companies. Let them together devise ways and means and give their earnest attention to their management, and order the taotais, prefects, and department and district magistrates in their several jurisdictions to conscientiously give protection as occasion may require. Should any shirk their responsibility in order to follow the old methods, ignoring the orders given, the said board will at once present a memorial stating the facts, and exert themselves to remove such obstructives. Let not the least leniency be shown. Respect this.

The second edict abolishes the bureau of railways and mines, hitherto in charge of Wang Wenshao Ch'u Hung-chi and Chang-i, and places all matters concerning railways and mines under the control of the foregoing board of commerce.

Wheat Crop of France.—If the estimate of the Minister of Agriculture be taken, the wheat crop of France this year is the largest for twenty-five years. According to the Bulletin des Halles the crop of oats will be 303,666,000 bushels and barley 46,827,000 bushels. Unless the present season's wheat has been materially

damaged, so as to render it unfit for milling purposes, but small quantities of foreign wheat will be imported to supply the local consumption.—*A. M. Thackara, Consul, Havre, France, October 22, 1903.*

Vital Statistics of France.—The Journal Officiel has recently published a report on the population of France during the year 1902. The births were 845,378 and the deaths 761,434, an excess of 83,944 births over deaths, against 72,398 in 1901. This result is due to a notable diminution of mortality, as there were 11,896 less births and 23,442 less deaths than were recorded in 1901. There were 291,431 marriages and 6,895 divorces last year.—*Thornwell Haynes, Consul, Rouen, France, October 30, 1903.*

Briquette Manufacture at Nantes.—Among other new enterprises to be put in operation at Nantes during the year 1904 will be a large plant for manufacturing patent fuel. This fuel is manufactured with coal dust and about 8 per cent of pitch. This latter article is becoming very scarce and the value has increased 25 to 30 per cent. American exporters of pitch might well examine the question of finding a market here; also at St. Nazaire, which produces annually 100,000 tons of patent fuel. This fuel, consisting principally of briquettes, is used mainly by the railway companies. The new plant at Nantes is situated near the new quays in the vicinity of the terminus of the State Railway.—*Benjamin H. Ridgely, Consul, Nantes, France, November 21, 1903.*

Wood Pulp in France.—Wood pulp for the manufacture of paper is always in demand in France, and the American article might easily find a considerable market at Nantes. The varieties desired are (1) la pâte mécanique, which means simply the wood pulp, not chemically treated; and (2) la pâte chimique au bisulphite, or, in other words, the wood pulp which has been chemically treated. The first must be sold here at not more than \$2.50 per 100 kilograms (220 pounds) and the second at \$3.86 per 100 kilograms. The customs duty on the first is 29 cents and on the second 48¼ cents per 100 kilograms. If any of our manufacturers of wood pulp think the matter of interest, I will be glad to put them in communication with persons in Nantes who are anxious to take the matter up.—*Benjamin H. Ridgely, Consul, Nantes, France, October 1, 1903.*

Rouen Chamber of Commerce.—On October 3, 1903, the Rouen Chamber of Commerce celebrated the two hundredth anniversary of its foundation. The Chamber of Commerce of Normandy, succeeded by the Chamber of Commerce of Rouen, was created according to the royal decree of August 30, 1701, which authorized the establishment at Lyons, Rouen, Bordeaux, Toulouse, Montpellier, La Rochelle, Nantes, St. Malo, Lille, and Bayonne of particular commercial chambers "to which merchants and traders of other villages and provinces could address propositions for facilitating and augmenting commerce." Paris, Marseilles, and Dunkirk had already possessed commercial bodies since 1700. All the chambers of commerce of Normandy and most of those of France participated in the celebration at Rouen this year. An important work of two volumes will be published soon, entitled "*Histoire de la Chambre de Commerce de Normandie et de Rouen.*"—*Thornwell Haynes, Consul, Rouen, France, October 30, 1903.*

Electric Tramways in Calais.*—Under date of October 31, 1903, United States Consul J. B. Milner, of Calais, France, writes:

Calais still has horse tramways, operated by an English company that has a franchise to run for seventeen years. The municipality projected an electric-tramway system and was granted the concession by the French Government. The contemplated system is estimated to cost \$600,000, in which three lines were comprised, having a length of 16 miles—8 miles within the corporate limits of the city—the contemplated system of traction being the Dickinson trolley. It was intended to commence the construction next spring and have the same in operation within one year. These plans have been upset by the death of the contractor, whose heirs are now trying to sell his rights. This leaves an opening for some company to become his successor by arranging with his heirs. An opportunity may exist here for some enterprising American company.

From Paris to Peking by Rail.—According to the *Boersen Courier*, a meeting was recently held in Vienna to arrange for direct service between western Europe and Peking, China. The meeting was attended by representatives of Russian, English, French, Bulgarian, Dutch, and German railroads. It was decided to run a train de luxe from London and Paris via Berlin and Warsaw to the Chinese capital, beginning May, 1904. The Russian Government will

* Extract from annual report of Consul Milner, which will be published in *Commercial Relations* for 1903.

arrange to simplify passport and customs regulations for through passengers to minimize delays and formalities. It is the purpose of those participating in this movement to make it possible for passengers to book in London or Paris to China without change. Another interesting item connected with the arrangements is the issuing of a round-trip ticket, first class, for \$204 which permits the traveler to make the trip both ways by rail or one way by rail and the other by water. The trip by rail is to be made in seventeen days. The tickets are to be good on the ships of all companies voyaging around Asia, and permission is to be granted to stop off at any port at which the ship calls, with the privilege of taking another ship.

Property Distribution in France and England.—By self-denial and rigid economy the French people with small incomes manage to lay up money. That property is widely distributed among the people in France is shown by the following statistics: According to the records of the courts of probate in England and the notarial records in France for the year 1902 there were settled in England 61,233 estates, netting \$1,440,000,000; in France, 363,612 estates, netting \$954,425,201. In England, of the total amount, \$580,000,000 were represented by fortunes of \$125,000 or less; in France, \$670,670,000 were represented by fortunes of \$100,000 or less. It follows from this statement that, while the fortunes passing by will or administration in England were 50 per cent greater in value than in France, there were over five times as many persons leaving property in France as in England; and while the fortunes of \$100,000 or less in France represented over two-thirds of the sum total, the fortunes of \$125,000 or less in England represented less than two-fifths of the total. A comparison with other countries would show, no doubt, that there is no other nation in the world where property is divided among a greater number of the population than in France.—*William A. Prickitt, Consul, Rheims, France, October 28, 1903.*

Exports of German Locomotives.—The exports of German locomotives during the first nine months of 1903 aggregated 16,506 metric tons in weight, being a large increase over the shipments for the same period of the preceding year. Of these shipments, 5,564 tons went to the British East Indies, 4,409 tons to Spain, and 1,146 tons to Italy. Holland and her colonies took 1,005 tons and Denmark 678 tons.—*Simon W. Hanauer, Deputy Consul-General, Frankfurt, Germany, November 18, 1903.*

German Agricultural Cooperative Societies.—Cooperative societies in Germany are desirable customers. The annual report for 1902 of the German Confederated Agricultural Cooperative Societies puts the amount of goods purchased by them at 70,000,000 marks (\$16,660,000). The cooperative unions of Neuwied, Wachenheim, Trier, Ausbach, and Tübingen purchased in the aggregate about 50,000,000 marks' (\$11,900,000) worth of merchandise. All these are agricultural unions and a large part of their purchases consists of fertilizers and of agricultural machines and implements.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 26, 1903.*

German Steel Trust.—The correspondent in Germany of a London paper states that the plan, which has been mooted for nearly a year, of forming a general trust or cartel of all the steel interests of Germany seems now in a fair way of being realized. It appears that for the present only the larger steel works are to be taken into the combination, such as are already in the steel-rail, girder, and half-rolled goods syndicates. These different syndicates will lose their identity in the new combination, while it is expected that several other syndicates, like the bar-iron, plate, piping, wire, and pig-iron combinations, will later attach themselves to it, but maintain their separate identity.—*Oliver J. D. Hughes, Consul-General, Coburg, November 16, 1903.*

Unfair Competition in Germany.—The Mühlhausen-Heilgenstadt-Worbis Chamber of Commerce has asked the Imperial Minister of Justice to recommend that the laws against unfair competition be made more stringent, with especial reference to the following: That in civil cases experts be called as witnesses; that the assignee of a bankrupt be the only one permitted to advertise the sale of the latter's goods; that no goods be allowed to be disposed of at forced sales except those in the assignee's possession; that all goods shall be knocked down to the highest bidder, or when at private sale to the first party offering the assessed value thereof.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, November 7, 1903.*

Geese in Germany.—Of all poultry in Germany, the goose is perhaps the most popular, yet the number raised (about 4,000,000), according to statistics, has grown less every year since 1892. The decrease in 1902, as compared with 1892, was: Prussia, 87,511;

Wurttemberg, 95,242; Baden, 3,880; and Saxony, 177,500—a total decrease of 364,133. On the other hand, the imports of geese into Germany are constantly increasing. In 1900, 6,220,055 were imported; in 1901, 6,431,247; and in 1902, 7,254,145, valued at \$5,513,492, five-sixths of which were from Russia. The imports are made, for the most part, between the first of August and the middle of December. The Russian geese are nearly all raised in the vicinity of the Black Sea.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, November 11, 1903.*

Germany's Production of Raw Iron.—The association of German manufacturers of iron and steel places the production of raw iron of the German Empire, Luxemburg included, for the month of September, 1903, at 327,298 metric tons, of which 37,799 tons were cast raw iron, 271,445 tons Thomas raw iron, and 18,054 tons puddled raw iron. This production is 4.18 per cent less than in the preceding month of August, which was 341,583 tons. In September, 1902, the total production was 291,997 tons; the production for September, 1903, was therefore 12.09 per cent larger. The total production of the works comprised in said association for the first nine months of 1903 was 2,924,293 tons, against 2,465,185 tons for the corresponding period of 1902, an increase of 18.63 per cent.—*Richard Guenther, Consul-General, Frankfort, Germany, October 22, 1903.*

German Industrial and Labor Conditions.—Notwithstanding optimistic expressions frequently appearing in the press and stock-market reports, the condition of business and labor in Germany is by no means reassuring or satisfactory. From all branches of industry loud complaints are heard of the unprofitableness of business, owing to acute competition. In every line efforts are making to reduce the cost of production, which is often done by reducing wages. Professor Sombart, the well-known economic expert, has of late conducted investigations as to the cause and effect of the economic crisis in Germany. In the opinion of this eminent scientist, the near future will develop "lower prices for manufactured articles and less demand for goods." He raises a warning voice against optimistic expectations which may be raised by semiofficial announcements, for with his light he sees hard times coming for Germany's economic life.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, November 5, 1903.*

German and English Coke in Mexico.—United States Consul S. E. Magill, writing from Tampico, Mexico, on November 25, 1903, says that but little coke has come from Europe since the 1st of July, and that was to fill contracts made last year. Coke was purchased from Germany and England by the smelter and steel company at Monterey. He states that the smelters will not use the European coke if American can be had at right prices, as the American is preferred; but the steel works like the German coke, and may use some of it in the future. The price of the first coke bought in Germany was \$6.48 per long ton f. o. b. Tampico; afterward it was bought for less, but the consul could not learn how much. The freight rates averaged about \$2.88 per ton from Amsterdam, Rotterdam, or Antwerp.

Consular Reform.—Zentralstelle für Vorbereitung von Handelsverträgen says:

The question of consular reform is now the question of the day in all countries where the world's trade is considered. The argument advanced is that we need consuls, in the first place, for the furtherance of commercial interests. One would think that this had been fulfilled in England long ago, but, as has been noted by the English press, the English consuls are not able to assist commercial circles effectively, since their reports, after they go through the Foreign Office and Board of Trade, appear too late to aid the British merchant. A system must be inaugurated which will enable the British consuls to reach interested parties in England with their reports while they are timely. The American plan must be copied. As is known, the United States Government has a Department of Commerce and Labor which utilizes the consular reports for the benefit of the business world by printing them in the ADVANCE SHEETS OF CONSULAR REPORTS, which appears daily, except Sundays and holidays. It is deserving of notice that the publicists of the United States, as well as those of England, consider the placing of the consuls under the Secretary of Commerce and Labor the beginning of consular reform.

Antiquated Tools and Implements in Germany.—The plow in universal use by the farmers of this locality would not be tolerated by an American farmer. The farm wagon is as antiquated as the plow. Many of the smaller farm implements are of the clumsy patterns in use a century ago. The carpenter uses neither hatchet nor handsaw, and his other tools are not nearly so complete as those of an American carpenter. Furniture is largely hand made and is correspondingly expensive. Although the highways here are nearly perfect, the light American buggy and phaeton are unknown. Though much is made of all navigable rivers for purposes of trade, small pleasure launches are rarely seen. The barber chairs used even in handsome city barber shops would not be tolerated even in

the smallest towns in the United States. Small office safes of the inexpensive and convenient types found so generally in the United States are not seen in this locality.—*H. W. Harris, Consul, Mannheim, Germany, November 25, 1903.*

Coal and Pig-Iron Output in Germany.—The output of Westphalian coal continues to increase, the maximum daily dispatch thereof being reached on August 29, with 20,078 double wagons of 10 tons each, which is double what the maximum was some six years ago. The dispatch of coal from the mines of upper Silesia has at the same time been considerable, averaging 7,000 double wagons of 10 tons per day during the month of August. The daily consumption of coal has consequently been much larger than during the good times two or three years ago, and this may be accounted for by the fact that most of the extensions of works and new blast furnaces which those good times called forth have only recently come into swing, not having been fully started on account of the subsequent great depression. The present activity is no doubt also greatly owing to the large sale of pig iron to the United States, although the home consumption is also increasing and is now 20 per cent larger than it was a couple of years ago.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 6, 1903.*

Proposed Leather Trust in Germany.—The leather manufacturers of Germany met in convention this week in this city, 170 leading tanneries being represented. The chief subject considered by the assembly was "the necessity of advancing the prices of leather." After a lengthy discussion a schedule of selling rates was adopted whereby the present market wholesale prices for leather are advanced from 5 to 10 marks per cwt. (\$1.19 to \$2.38 per 110 pounds). One of the delegates, to whom the matter of leather prices had been previously committed for study, showed that among other causes which affected the German leather trade adversely was the sale of American-made shoes in the German markets, which came at a time of depression when the demand for homemade shoes had slackened. The high price ruling for raw hides, caused by a shortage in offerings, was also given as a cause for the increase. The convention adopted a resolution recommending the creation of a German leather trust, for the protection of the interests of German tanners. A fund of 40,000 marks (\$9,520), as an initiatory step for the formation of this trust, is to be raised at once.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 27, 1903.*

German Municipal Debts.—According to the Statistical Year Book for German cities, the municipal debts were as follows:

City.	Debt.	
	Marks.	
Berlin	313,000,000	\$74,494,000
Munich	147,500,000	35,105,000
Frankfort	107,000,000	25,466,000
Leipzig	82,600,000	19,658,000
Cologne	73,400,000	17,469,000
Hanover	68,800,000	16,374,000
Dresden	63,500,000	15,113,000
Breslau	57,000,000	13,566,000

Then follow Elberfeld, Magdeburg, Nuremberg, Düsseldorf, Charlottenburg, Mannheim, and Stettin, with debts from 40,000,000 to 50,000,000 marks (\$9,520,000 to \$11,900,000) each. The total debt of the fifty-two German cities is more than 1,865,000,000 marks (\$443,870,000), not including newly made loans amounting to 216,000,000 marks (\$51,408,000) and a new loan of 228,000,000 marks (\$54,264,000) soon to be made by the city of Berlin. The annual amount for interest and sinking fund is 16,250,000 marks (\$3,867,500) for Berlin. The next highest amounts are for Cologne, with 10,800,000 marks (\$2,570,400); Munich, with 8,400,000 marks (\$1,999,200); and Frankfort, with 7,400,000 marks (\$1,761,200).—*Richard Guenther, Consul-General, Frankfort, Germany, October 22, 1903.*

Condition of the German Textile Industries.*—The loss by a great part of the German textile industries of the American markets caused, some years ago, the attempt on the part of the German manufacturers to combine for a reduction in the output and an agreement as to prices. For various reasons this has never been successful. The first syndicates were organized about four years ago in certain quarters where this industry predominates, but the members, it is said, did not live up to the agreements. A new attempt was made in 1901 among the South German producers, where the industrial situation was in a better condition, to diminish production 25 per cent, but the agreement carried with it the clause that the association bound themselves to bring into the combination all the manufacturers in Germany. This was not accomplished, however, and during 1902 attempts were again made, this time by the manufacturers along the Rhine, who proposed a diminution of the

* Extract from annual report of Consul Ozmun, which will be printed in full in *Commercial Relations* for 1903.

working hours of 15 per cent after the 15th day of September. The South German manufacturers declined to go into this association and the situation for 1902 became worse than before. Of 45 manufactories 22 sustained losses in 1900, 26 in 1901, and 33 in 1903.—*Edward H. Ozmun, Consul, Stuttgart, Germany, October 23, 1903.*

Inland Water Ways in Germany.—The most notable meeting in this district during 1903, and one of the most important held in Europe, was a three-day session of the German and Austro-Hungarian Association for Inland Navigation, held in Mannheim from September 9 to 12. This association is made up of members from the two Empires, who either in a private or official capacity have taken conspicuous part in inland-water-way improvement in the two countries or in freight transportation on such water ways. The September meeting was attended by several cabinet ministers and other high officials besides many noted engineers. Papers were read on a variety of topics pertaining to the subjects of inland-water-way improvement; the further extension of canals in Germany, notably to connect the upper Danube and upper Rhine systems; the relation of river shipping to manufacturing and to State railways; and other allied topics. The papers read, as well as the discussions that followed, gave renewed emphasis to the importance of inland water ways in the industrial development of Germany, the need of still further improvement of these water ways, and their continued operation under private control with proper recognition and guaranties from the several States.—*H. W. Harris, Consul, Mannheim, Germany, November 25, 1903.*

Bogus Antiquities.—In reciting the different articles exported to the United States in his annual report dated October 20, 1903, United States Consul F. B. Keene, of Florence, Italy, says:

Next in value are antiquities of every kind, description, and alleged epoch, but most of them such clever imitations as to require experts to detect the deception. The only competent judges in the matter are the officials of the Government galleries, whose duty it is to inspect and seal all cases of works of art intended for exportation. Should they, however, find any precious ancient pieces, they, ex-officio, hinder the exportation, yet thousands of cases are classified as ancient works of art and dispatched to all countries. The question of price for antiquities is most difficult to ascertain, for it is one of individual taste and means.

Cooperative Associations in Italy.—Tuscany is reported to have one cooperative association for every 11,063 inhabitants and Emilia (Bologna and dependencies) one for every 7,160 inhabitants. In Florence the limited companies, for the purpose of building houses for workmen, accomplish their mission in a gratifying way, coupling their own interest with those of the working people. In Florence there are 39 associations of mutual help, embodying every line of trade, artists, employees, etc., besides a similar number of benevolent institutions for the sick and poor.—*Francis B. Keene, Consul, Florence, Italy, October 20, 1903.*

Trade of Ravenna, Italy.—The remarkable growth of Italy's industrial and commercial wealth is nowhere better indicated than in the new movement that characterizes the ancient city of Ravenna. From official statistics at hand, it appears that during the last calendar year (1902) there was a navigation movement in the port as follows: Vessels entered and cleared, 1,347; tonnage of vessels entered and cleared, 137,192; passengers, 3,315; crews, 15,869. Exports consisted chiefly of bricks, rice, hay, and wine. The imports were coal, lime, wheat, and sundries. The commerce of the town is developing as never before in its history. The tramway movement from the docks was 24,000 tons, an increase of 8,000 tons over that of last year.—*Francis B. Keene, Consul, Florence, Italy, October 20, 1903.*

New Notary Law in Durango.—The congress of the State of Durango has just passed a new notarial law. The fees for notarial services are put on practically the same scale as in the Federal District of Mexico, and the new law is very similar to that now prevailing in the Federal District. The chief difference between it and the law it supplants in the State of Durango is that it separates the office of notary from that of attorney at law; notaries become regular officers of each county (*partido*), are restricted in number, and can not practice law.—*James A. LeRoy, Consul, Durango, Mexico, November 7, 1903.*

Extension of Mexican International Railroad to the Pacific.—It looks at last as though the long-talked-of extension of the Mexican International Railroad from Durango to Mazatlan on the Pacific coast is to be realized. The International has been under heavy expense all summer for the various surveying parties at work between here and Mazatlan in the Sierra Madre. The president of the road, Mr. Metcalfe, recently returned from a horseback trip over

the route now selected, going to Mazatlan and back. He is now in the United States for a conference with the chief backers of the railroad. The original estimates of cost for the 220 miles of this extension was \$10,000,000 United States currency, but recently revised estimates put the figures at \$12,500,000. It will reach an elevation of 9,000 feet, and will have an abrupt descent on the western slope of the Sierra. It will put San Antonio within 700 miles of a Pacific seaport and New Orleans within less than 1,300 miles.—*James A. LeRoy, Consul, Durango, Mexico, November 7, 1903.*

Matamoros as a Trade Center.—The products of the northwest and Pacific slope have always sought an outlet by the most direct lines to the Gulf. This fact, after the railroads are completed to Matamoros—which will be within one year—may give such an impetus to Gulf commerce that the improvement and reopening of the old harbor of Bagdad, at the mouth of the Rio Grande, may be considered necessary. This could be easily accomplished with the expenditure of money and by international agreement, thus giving the world one of the finest harbors on the Gulf coast. It would be of inestimable value to the United States, especially, after the completion of the Isthmian Canal. The present prospects and superior advantages of Matamoros assure it a future commercial prestige sufficient to make it one of the most important trade centers in America. The custom-house of Matamoros is the only one in the Republic that enjoys a maritime and frontier distinction.—*P. Merrill Griffith, Consul, Matamoros, Mexico, November 6, 1903.*

Counterfeit Russian Notes.—Manchuria is full of Russian counterfeit notes, mostly 3-ruble notes, which come from Japan and Shanghai and are manufactured very skillfully. They are usually distributed among the rural population. As such notes might depreciate Russian paper money and injure Russia's credit in Manchuria, strict orders have been given by financial authorities to take immediate measures to destroy such notes and to imprison persons who distribute them.—*Richard T. Greener, Commercial Agent, Vladivostock, Siberia, October 5, 1903.*

Village Industries in Russia.—The Ministry of Agriculture and Domains is now occupied with the project of reserving as many as possible of the contracts for Government supplies for village industries. The ministry has undertaken to be the agency for all the

other Government departments. Thus the artillery department contracted for 55,000 cartridge boxes with the villagers of the Moscow, Nizhni Novgorod, and Perm Provinces. The commissary department let out large orders for harness and leather articles for soldiers' outfits to the villages of Saratoff and Ufa Provinces. It is remarkable that up to the opening of the exhibition of village industries in St. Petersburg in 1901, the authorities of the Province of Saratoff had no idea to what a scale of development the village industries had reached there; the Province does not produce sufficient grain for its population and outside work is inconsiderable. The navy department has also given large contracts for cloth in several Provinces.—*R. T. Greener, Commercial Agent, Vladivostock, Siberia, August 29, 1903*

Cotton Crop of 1902 and Cotton Industry in Russia.—The Russian journal *Patrie*, in a recent issue, says:

Last year was not favorable for cotton growing, the crop being 13.1 per cent less than that of 1902. The area devoted to American cotton has diminished 32.5 per cent, while that devoted to native cotton has increased 32.2 per cent. The cotton plant suffered a great deal from the grasshoppers during the fall of 1901. The Russian planters, fearing a recurrence of this pest, did not plant cotton in the zones affected. The system of borrowing money on the cotton crop has also caused the cultivation of this crop to decline. If cotton has been "bulled" on the market, when the time comes for its delivery the producer loses. On the other hand there is such a competition between the buyers that they do not derive as much profit as they otherwise would. The broker, once he has received his commission, is not troubled about the condition of the cotton, since it is already paid for; while the producer, seeing that he will receive no great benefit, mixes stones, dirt, tow, etc., in the cotton. Another cause of the decline of the culture of cotton is the fact that the soil has become exhausted through continual cropping.

Improving the Railway System of India.—According to reports from Austrian consuls the East Indian government contemplates extending and improving the railroad system of that country. Heavier locomotives and cars, after the type of those used in the United States, are to be adopted. The administration of the East Indian railroads has its chief office in London.—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, October 28, 1903.*

Magnetic Iron Sand in Java.—In the neighborhood of the town of Tjilatjap, on the coast of the island of Java, extensive deposits of magnetic iron sand have been found. The deposits begin opposite the island of Noesa Kembangan and extend about 29 miles to the east along the coast line. The sand lies on the surface and is said

to contain in some places as much as 80 per cent of iron. Samples taken in different parts give a very good result when smelted. Some time ago an English company, with a Hollander at its head, acquired the right of exploiting these deposits, which have been known since 1854.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, October 28, 1903.*

Student Machinists on Russian Railroads.—An order has been issued to the Siberian Railroad agents to discharge all the students employed in the capacity of machinists and assistant machinists on the locomotives of the railroad. This order affects the employment of nearly 100 persons and is brought about by the wrecking of a butter train near Cheliabinsk. The machinist on the wrecked train was a student of the Tomsk Technological Institute.—*R. T. Greener, Commercial Agent, Vladivostock, Siberia, August 26, 1903.*

Electric Tramways in Sweden.—Stockholm's electric tramways now in construction are to be ready for use early next year. The tenders accepted for the new lines were made by Swedish and German contractors in combination. The American bidders were unsuccessful in securing the contracts. The amount to be expended in this work is about 3,000,000 kronor (\$795,000). Several other cities in Sweden—Gefle, Malmo, Norrköping, Sundsvall, and others—are contemplating exchanging their street-railway lines from horse-power to electric power.—*Edward L. Adams, Consul-General, Stockholm, Sweden, October 26, 1903.*

Decreased Railway Freight Rates in Mexico.—The old scale of freight rates on the railroads of Mexico was restored the latter part of November, the decree of the Government permitting an increase of 15 per cent from September 1 last being canceled. The concession was granted because of the fall of exchange below \$2.20 to \$1. Old rates were restored because exchange had remained pretty steadily above \$2.20 to \$1 for more than a month, and apparently the Government is satisfied that it will remain in general above that figure.—*James A. LeRoy, Consul, Durango, Mexico, December 9, 1903.*

Electric Appliances for Venice.—For the past two years a company has been steadily working to harness the water power of the River Celina for electrical purposes. The company promises, by January next, to furnish a greatly improved and cheaper electric

light, the need of which has been much felt in Venice. There is, however, no immediate prospect of the city being so illuminated, owing to the existence of a long contract for lighting by gas. The opportunity, therefore, is given to American manufacturers to introduce the many electrical appliances for which there will now be an increased demand, but, as has been so repeatedly noted in past reports, the Venetian merchant pays little attention to catalogues, even though printed in Italian, and the only successful way to compete in this market is through commercial travelers.—*Robert Woods Bliss, Consul, Venice, Italy, October 31, 1903.*

Electric Railroads in Europe.—The commissioners of the Dortmund suburban district have decided to build an electric railroad at the district's expense. The General Electric Company (Allgemeine Elektrizitätsgesellschaft), of Berlin, whose bid of 1,640,000 marks (\$390,320) has been accepted, will build the road and operate the same, under a concession, for a period of ten years. New electric roads are being built in many European cities. The above-mentioned company, which has a capital of 60,000,000 marks (\$14,280,000) and a bonded indebtedness of 30,000,000 marks (\$7,140,000), is constantly receiving new orders. As a matter of fact, it has already built roads, some of which it still operates, in Germany, Italy, France, England, Russia, Mexico, and South American countries. Other German electrical companies are also very active.—*Brainard H. Warner, jr., Consul, Leipzig, Germany, October 13, 1903.*

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Link in the Lima-Buenos Ayres Railway.—A law was promulgated to-day under which a railway will be completed from Lima to Pisco, a distance of 140 miles in a southerly direction along the coast. The company is already organized at Lima to build the road. The State guarantees, by the terms of the law, 7 per cent per annum on £500,000 (\$2,433,250), the estimated cost of construction from the present terminus, Chorrillos (9 miles from Lima), to Pisco. Should this line be prolonged to a point on the Southern Railway, which connects the port of Mollendo with Lake Titicaca, the dream of an all-rail journey from Lima to Buenos Ayres would seem to be nearing accomplishment and undoubtedly an important gap in the Intercontinental Railway would have been filled. This is, however, a merely speculative suggestion. The surveys in 1891 and 1892 of the engineers of the Intercontinental Railway commission followed a route from Oroyo to Cuzco.—*Irving B. Dudley, Minister, Lima, Peru, October 21, 1903.*

Power Signaling on British Railways.—The following from the London Times of November 11, 1903, is forwarded by United States Consul F. W. Mahin, of Nottingham, England:

Three distinct systems of power signaling are now engaging the consideration of British railway managers. These are (1) the all-electric, (2) the electro-pneumatic, and (3) the pneumatic. The first-named system has been adopted by the London and Northwestern Railway at Crewe, and also by the Northeastern Railway Company at their Severus junction box, York, while the Northeastern Railway at Tyne Dock, the Lancashire and Yorkshire Company at its new station at Bolton, and the Great Eastern Railway at Bishopsgate street goods yard have installed the Westinghouse electro-pneumatic system. The third system—the pneumatic low pressure—has been installed on the London and Southwestern Railway, while it is announced that the Northeastern Railway, which has already experimented with the first two named systems, has now arranged for an installation of the low-pressure pneumatic signaling, in order to arrive at the relative merits of the three systems of power signaling on the market. The Great Central Railway Company, which is about to equip its Woodhead Tunnel with the "Miller" electric signals, has recently placed a contract with the British Pneumatic Signaling Company for the installation of pneumatic signaling in the neighborhood of Manchester. This installation will extend over a large area and will be the largest power signaling plant in Great Britain, and second only to that now in working at the South Terminal Station at Boston, Mass. It is also stated that the Caledonian Railway Company has arranged for the experimental installation of electrical signaling, so as to determine the precise system to be adopted in the working of its enlarged new central station at Glasgow.

Iron and Steel Plants for Spain.—It is probable that Spain will jealously protect her steel industries by a high tariff, but it seems to me that we ought to be able to take a very large part in supplying Spain with all necessary plants for the erection of her new and the enlargement of her old iron and steel works. The plants will certainly be required, and it ought not to be difficult to convince the intending buyers that it would be to their interest to order their machinery from the United States.—*Julius G. Lay, Consul-General, Barcelona, Spain, October 23, 1903.*

Combination of Wood-Pulp Manufacturers of Sweden and Norway.—United States Consul R. S. S. Bergh, of Gothenburg, Sweden, under date of November 17, 1903, sends the following translation of the report of a meeting recently held to effect a combination of the pulp manufacturers of Sweden and Norway, which appeared in the Gothenburg Trade and Shipping Journal:

Representatives for the sulphite (pulp) factories in Sweden and Norway met yesterday at the iron office, under the presidency of Director K. A. af Ekström, of Forshaga, Sweden, and decided to establish a common sales office for sulphite

pulp. The office will be located in Gothenburg and will begin business next year. All the largest manufacturers in Scandinavia have joined in the coalition, which is considered to have been made at a specially favorable time, prices being firm. The coalition or union embraces a production which represents a sale value of about 30,000,000 kronor (\$8,040,000).

Beet-Sugar Factory in Turkestan.—Near Taschkent, the capital of the district of Turkestan, the erection of a beet-sugar factory was commenced some time ago, which is expected to be in working order in September, 1904. Its annual output is estimated at about 50,000 double centers (11,000,000 pounds), about one-fifth of the total consumption of sugar in Russian Central Asia. The beet root is said to contain in Turkestan about 2 per cent more sugar than in European Russia, so that it is very likely the sugar industry in those parts will develop favorably and quickly.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 6, 1903.*

Venezuelan Tariff Changes.—United States Consul E. H. Plumacher, of Maracaibo, Venezuela, on October 20 reported the following tariff rates decreed by the President:

Import duties.—"Iron cramps" to fasten the hoops of boxes and barrels are placed in class 2 (2.4 cents per 2.2 pounds); "narrow bands of cloth and rubber used for straps for machinery of little force" are placed in class 4 (17.4 cents per 2.2 pounds).

Export duties.—A duty of \$1.54 per head for young cattle, calves, etc., under 440 pounds weight; all beef cattle exceeding that weight, except cows, are free of duty. A duty of \$3.86 per head for cows not with calves, and the exporter must procure special permits from the Minister of Fomento for each embarkation.

Tariff decisions.—By a recent decree, cylinders and other accessories of phonographs, when imported into Venezuela separately, shall be scheduled in class 5 (28.95 cents per 2.2046 pounds) of the tariff.

Immigration into Manitoba from the United States.—According to statistics furnished by the commissioner of emigration of the Dominion government, 122,141 immigrants settled in Manitoba during the nine months ended September 30, 1903, of whom 41,000 came from the United States, as against a total immigration for the same months of 1902 of 54,490, of whom 23,000 were from the United States. Very energetic efforts were put forth during the present year by the Dominion government to induce immigration

from the United States, and with considerable success, as the figures given show. However, it should be known that a large proportion of the immigrants from the United States were Canadians who had resided for a shorter or longer time in the United States.—*A. H. Graham, Consul, Winnipeg, Manitoba, October 20, 1903.*

Immigration into the Transvaal and Orange River Colonies.—The following figures recently made public show the number of immigrants into the Transvaal and Orange River colonies during the nine months ended September 30, 1903:

Transvaal:

Newcomers.....	24, 524
Old residents.....	7, 827
Total	32, 351

Orange River Colony:

Newcomers.....	7, 113
Old residents.....	1, 263
Total	8, 376

Total for both colonies.....	40, 527
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Exburghers who were prisoners of war and exburghers who came under the terms of the general surrender are not included in these statistics.—*J. E. Proffit, Consul, Pretoria, Transvaal, October 15, 1903.*

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INTRODUCING AMERICAN TRADE IN ENGLAND.

(From United States Consul Lathrop, Bristol, England.)

BRISTOL AS A TRADE CENTER FOR AMERICAN MANUFACTURES.

A noticeable accession of energy has come to the Bristol people within the last few years. It is the optimistic and go-ahead communities with which it pays best to establish commercial relations. American exporters of manufactured goods have in the past either overlooked the advantages of Bristol or, in endeavoring to utilize them, have not always received encouragement. Local conditions will henceforth continue to improve year by year, and I hope and believe that Bristol will become an entrepôt and distributing center for its fair share of our manufactured products. It has some disadvantages as compared with Liverpool or London as headquarters and principal storage place. On the other hand, it has some distinct advantages. Certain classes of manufactures may, I think, be worked and distributed from Bristol more economically and quite as easily as from any other English center.

It has been found in practice, and will continue to be found by our exporters, that the only way in which they can firmly establish a new article is either to send their own representative or to give an exclusive agency to some English firm. It is only the manufacturer on a very large scale who can adopt the former method, and most of our exporters have adopted and will continue to adopt the latter.

For a city of the size of Bristol, there has been a curious absence of the middleman—of the general jobber. There is not, at the present moment, in Bristol any considerable number of firms of capital and standing who are prepared to take up and handle a new commodity. I have often been obliged to advise inquirers from the United States that I was unable to find a firm which was willing to go even so far as to enter into correspondence. I have never tried to find agents for shippers of commodities, which, in my judgment, could not be successfully handled. It follows that this failure to find local agents was in connection always with some business of sufficient promise to be worthy at least of a letter.

There has been a decided disinclination to alter old methods or to undertake any venture which involved a slight element of uncertainty. I find less and less difficulty in this respect as time goes on. It is true that the number of substantial firms sending commercial travelers from Bristol as a center over a considerable area, who are prepared to take up and push an imported article which would be purchased by the class of retail traders upon whom their travelers call, is still a limited number, but it is growing.

The great advantage which Bristol possesses as a head center from which to develop a national inland trade is that of economy. The cost of living here is lower than in London or Liverpool. The rents of business premises and warehouses are very materially less, and taxes, salaries, wages, and the general all-round expenses of a mercantile house are not as great as in either of these other cities.

As an evidence that these advantages are appreciated, it may be mentioned that Bristol was chosen deliberately, some years ago, as the center from which to conduct an exclusive agency for the United Kingdom of the Swedish machine-made horseshoe nails. This business—one of very considerable volume—has been advantageously and successfully worked from here. It is true that shipments are made to London, Hull, and other ports direct from Sweden, but this is done at the direction of the Bristol agent to meet large orders in the vicinity of those ports. Small parcels are, however, often sent from stock in Bristol to the north of Scotland and to Ireland; and commercial travelers work these far-away places in the interests of these nails from Bristol, as a center.

Certain American products are also handled for all England, through an exclusive agent at Bristol, and very successfully and satisfactorily, too. These are principally manufactures of iron, such as horse rasps, files, machinist's hammers, etc. The very ingenious blacksmith's tools manufactured by an American firm have only lately been introduced to English notice through Bristol agencies.

When the new docks shall have been completed, and the largest vessels can come direct to the port, I confidently anticipate an increase in the number of jobbing firms that will be open to consider any promising business. In the meantime, I can not always send satisfactory replies to American exporters who desire to ship direct to Bristol. The number of such unsatisfactory replies becomes smaller, however, as the time goes on.

ENGLISH AGENTS AND AMERICAN MANUFACTURES.

As to English agents in general and to the most satisfactory methods of introducing our products, I may say that in most cases the only practicable thing is the giving of exclusive territory for a

definite period. In no other way can an English agent be induced to push a product with energy and discretion. He does not wish to run the risk of expending time and money in introducing something new and finding, when the ground has been broken and his hardest work is done, that some one else steps in and reaps the reward. Our manufacturers, on the other hand, have a natural disinclination to tie themselves up for a considerable period. They fear to find that they have bound themselves to one who is spoiling territory—who prevents them from, or delays them in, the developing of their English market.

There is only one way to adjust these different points of view, and that is to make the most searching and careful inquiries before tying themselves up and, after they have done that and have entered into agreements, to give the most perfect confidence to their agent and the most serious attention to his suggestions.

Entering into a new foreign market is a very serious matter, and the most careful consideration should be given to each detail of the campaign. One-third of the letters which I receive from would-be exporters are what would be described here as “try-ons.” The factory may be overstocked for the moment, and it occurs to somebody that he will write letters to a dozen consuls asking them to find correspondents; then he sits down and waits for replies.

What happens sometimes may be illustrated by giving the history of a case which came under my own observation.

The correspondent was duly found. He was a man with capital and of good standing in Bristol. He had large warehouses and his travelers covered the whole of Great Britain. He had hundreds of customers on his books. The manufactured product which was offered was of a kind that was sold by his customers. It would be easy for his travelers, he said, “to introduce this new line.” He thought it very promising, provided the articles were of a size and strength and shape to meet the English requirement. There was an immense market for articles of this nature, and if the American product could give the slightest advantage in price there was reasonable prospect of a large business.

The correspondent sent all these facts over, asked for a “line of samples,” stated the conditions under which he did business with his customers, the credit which he gave, and the terms on which he was prepared to work with the manufacturers.

A reply came in due course, suggesting that he send forward a definite order for the goods and saying that terms were “spot cash.”

The correspondent laughed and put the letter in the waste-paper basket. He had been asked to give a definite order for goods which he had never seen and which might vary in such details from

English requirements as to be unsuitable. He had been approached first as a commission agent and asked to cooperate as such with the American manufacturers in introducing their goods to the English market. He was now approached as a merchant and direct buyer, and rather curtly told that he could not see the goods unless he sent a definite order. In asking him for spot cash they were demanding terms which would have eaten up all his profits in interest. The conditions of his business required him to give credit to his customers.

That was how this experiment terminated—in the waste-paper basket. That is the place in which a good many end.

It is to be regretted that letters referring to export trade are so casually scattered by some of our manufacturers. Jobbers in this country know them well by this time. If a letter which they receive, or which may be placed in their hands, appears to belong to this class of hasty nonserious “try-ons” they will not answer it. They see such a number of these cases that they become skeptical about all offers. If they find that a serious determination exists to develop permanent trade, they make the most exhaustive inquiries on their own part; they court the same from the other side. Then they give and ask the fullest confidence. They expect the shipper to meet the English terms as to credit. They will not, in fact, do business with him if he can not or will not do this. They expect that he will modify the details of his product if these are not in accord with English requirements. They are aware that interest is higher in the United States than it is here—that money is more valuable. They advise the exporter of this fact, of which no doubt he is already aware; and they do not expect that he will commence doing business unless this fact has been taken into consideration and prepared for. They are aware that with most manufactured products it is a very costly and difficult thing to alter patterns in the slightest degree. They advise the manufacturer that such alteration is, however, inevitable, if he wishes to do business in this market. They do not expect nor wish him to try to do business unless he is prepared to make this alteration in patterns, has considered the cost, and has allowed for it.

The whole situation may be summed up by saying that all serious attempts to inaugurate permanent export business should be preceded by the manufacturer's determination to meet the foreign demands as to credit and patterns.

If his preliminary letters do not hint at his willingness to do these things, or to give time and thought to calculating as to whether he can afford to do them, the letters may not receive serious consideration.

It is considered by jobbers in England that new agencies do not

pay them until about two years have elapsed. In the intervening time it is largely outgo and trouble. They want, with most classes of commodities, an exclusive agreement extending beyond this period. They want the cordial cooperation and full confidence of the manufacturer, especially during this time of foundation laying. In certain cases and with certain classes of goods in the introduction of which special difficulties will be found they will ask that some proportion of the expenses shall be borne by the manufacturer. Sometimes these difficulties will not be apparent to the latter. I may mention, as an illustration, that the blacksmith and horseshoer in England belong to a class remarkable for conservatism and for staunchly maintained prejudices in favor of "the way my father and my grandfather did before me—which is good enough for me." The greatest tact and patience have been requisite in pushing the American tools that are intended to supersede the clumsy ones which the blacksmith has heretofore roughly forged for himself.

In concluding these references to export matters I may refer to one or two minor comments which have been made to me by agents of American manufacturers. One who had not an exclusive agency told me that a large iron merchant to whom he had sold considerable quantities of one of our iron manufactures declined abruptly to handle it in the future, because he found that one of his customers, doing a very large retail trade, had been supplied direct from the American factory. It is hardly to be expected that our manufacturers will refuse an order from a retailer when by such action they are not contravening any agreement, but they will find that in certain classes of trade it will not pay them in the end to act in defiance of certain cast-iron customs and conventions. Some of these customs are quite out of date. They will none the less be humored by such of our manufacturers as are making a serious and determined effort to establish a regular trade with England.

UNDERPAID LETTERS.

I wish to refer to a trifle which is a constant though small irritation. I have seen on a merchant's desk in one morning's mail 12 underpaid letters, on each of which the English post-office had collected double the deficiency. The American office boy who stamps the letters should be instructed that an increasing proportion of his employer's mail now goes to foreign countries, and that he should note the address on each envelope and affix the stamp accordingly.

LORIN A. LATHROP, *Consul.*

BRISTOL, ENGLAND, *November 22, 1903.*

AMERICAN PRODUCTS IN EAST CENTRAL ENGLAND.

(From United States Consul Mahin, Nottingham, England.)

The products of the United States sold in this district—which embraces the shires of Nottingham, Derby, Lincoln, and Leicester—being so great in quantity and variety, it is difficult to suggest openings for additional kinds or to offer hope of increasing the sale of our products now used there.

Silverware.—In some cases where articles of American make are now unrepresented there are apparently insurmountable difficulties. To illustrate, American silverware is rejected on the ground that it is too ornate and too light; the English preferring heavier and perfectly plain ware, dealers will not consider any other kind.

Shoes.—The trade in American shoes is considerable in this locality, but it is not increasing. Complaint is made by dealers that, on the whole, the leather is inferior and does not wear as well as the English product. The price is rather higher than good shoes can be bought for in the United States, \$4 being the lowest price here for a good American shoe for men. It would seem that the \$2.50 to \$3.50 make of shoes in such favor in America with men, who find them very durable, would command a good sale here, but I have seen none of them in this market.

Bicycles.—At one time American bicycles were marketed in this locality, but not one is now to be found here unless belonging to a resident American. The hostile expressions heard indicate that an American wheel could not be disposed of here except as a gift; for it is alleged that the people who bought wheels made in the United States were “cheated with worthless rubbish dumped on this market at prices just low enough to undersell the home market.” There appears to be some truth in this, but the hostility arises partly from sympathy with local bicycle factories, which claim to have once enjoyed a lucrative trade with the United States, built up at a heavy expense, but destroyed, it is alleged, by the imposition of heavy import duties. The bitter resentment felt and freely expressed by these bicycle makers is shared, more or less, by the general public.

Sewing machines.—Many thousands of sewing machines are used in the lace and hosiery factories. In Nottingham and Leicester alone nearly 200 firms are using American overlock machines. In a single room of one factory 180 are running. Twenty firms use over 1,000 high-speed lock-stitch machines, which have a speed of

4,000 stitches a minute. These machines are all made in the United States. The sale is pushed by energetic resident agents, exclusively employed. This is the proper method. Its general use by present or would-be American exporters would soon double our foreign trade in various lines.

Some German and British sewing machines are also found in local factories, but they are altogether inferior to the American, are used for simpler purposes, and only because they are cheaper, or because the characteristic hesitancy about making changes lets them stay.

Butter.—England relies, to a great extent, upon imports for its butter and eggs. Denmark alone sells daily to England over \$200,000 worth of farm products, chiefly butter. English butter is generally unsalted and becomes rancid in a day or two. Danish butter resembles our western dairy product and keeps sweet and fresh indefinitely. It retails here for 25 to 30 cents, the price generally ruling 2 to 6 cents less than that of the home product. The popularity of Danish butter is apparently responsible for the charge recently circulated in England that much of it is, in fact, only Russian butter repacked in Denmark, which is circumstantially denied in that country. Much more Danish than English butter is used in this country. One grocery alone, in this city, sells a ton of it a week. England's annual import of butter amounts in value to about \$90,000,000, most of it coming from Denmark. The share of the United States is only about \$3,000,000. Only wheat, wool, and cotton equal butter in value of import.

Eggs.—The eggs sold here are of three kinds—new-laid eggs, fresh eggs, and eggs. "New-laid eggs" are brought from neighboring farms and sell just now for 36 cents a dozen; "fresh eggs" are supposed to come from Ireland and retail at 30 cents; "eggs" are imported from foreign countries, chiefly from Russia, and sell for about 18 cents a dozen. The value of these imported eggs is about \$30,000,000 annually, of which the United States sends less than \$1,000,000 worth.

It would seem that at such prices as butter and eggs command here they might be profitably exported from the farms of the United States in much greater quantities than at present.

Hay.—A Texan who was recently visiting in this country discovered that hay sold in this market at a much higher price than that ruling in his State. Figuring on the cost of freight from Texas to this city, and all other expenses incident to transportation, he informed me that with Texan hay he could undersell the home product in this market and make a fair profit, and that he had fully decided to try the experiment.

Canned fruits.—All kinds of American canned, bottled, dried, and smoked fruits and other edibles are sold in the principal groceries here at practically the same as American prices, the cost of ocean freight being but nominal.

Office furniture.—Firms making a specialty of office furniture sell more American than English goods. Practically the entire equipment of dentists' offices is American.

How to hold British trade.—In going over the various kinds of practicable exports from the United States to England it is difficult to find any vacant opportunities. The most a consul at this post can suggest is that care be taken to prevent any disappointment in the quality or the preparation of goods and that liberal terms of payment be given in order to still further increase the sale of the American articles now used here.

FRANK W. MAHIN, *Consul.*

NOTTINGHAM, ENGLAND, *November 15, 1903.*

CARDIFF AS A DISTRIBUTING CENTER FOR AMERICAN PRODUCTS.

(*From United States Consul Phillips, Cardiff, Wales.*)

Cardiff continues to make remarkable progress. The percentage of increase in trade and population is about the largest in the Kingdom. The exports during 1902 reached the enormous total of 19,970,000 tons. The registered tonnage of vessels cleared for foreign ports was nearly 8,000,000, thus placing it first in the world for exports. It is exceedingly unfortunate that there is no direct communication between the ports of the United States and that of Cardiff. American shipping was once very brisk in this port, but it has practically ceased long ago.

Cardiff is a magnificent center for the distribution of food stuffs, fruit produce, and other goods of American manufacture. It possesses all the natural and acquired advantages necessary for the safe running of a trans-Atlantic service. The port has one of the most sheltered positions in the British Channel. Penarth Head, 200 feet above high-water mark, forms a natural breakwater, to which vessels frequently run for shelter during a continuance of westerly and southwesterly gales. At Barry, the entrance is well sheltered from the same winds. The port has two large breakwaters, which completely cover all points of exposure. The Barry Dock Company has also recently built specially constructed transit warehouses capable of storing any quantity of perishable goods, the building covering nearly 6 acres. A breakwater and pier have also been erected, where loaded vessels can run alongside and discharge and load with-

out entering the dock. The water is so deep that vessels have no need to wait for the tide. Another important consideration is the facility for obtaining the best Welsh steam coal for bunkering purposes. Steamers can discharge their cargoes at Cardiff and land bunkers without being compelled to change ports, and thus save at least one port charge and the consequent loss of time and expense incurred at other import docks. The dues on the vessel and cargo are lower than at any other port in the Kingdom.

Cardiff, from its geographical position, is the natural ocean port for the Midlands generally, embracing Birmingham and South Staffordshire. By the completion of the new Severn water way, Cardiff is enabled to place timber and grain in the Midlands at a less rate than either London or Liverpool. This will also apply to the food produce.

DANIEL T. PHILLIPS, *Consul*.

CARDIFF, WALES, *November 20, 1903.*

AMERICAN MANUFACTURES IN SCOTLAND.

(From United States Consul Fleming, Edinburgh, Scotland.)

American pumps have lost none of the favor in which they have long been held. The trade is well managed. Some makers of these and other American devices have shown good business tact by sending representatives to customers in this country, not to solicit orders but simply to take suggestions as to any improvement or change which might better adapt them to the market. This enterprise of manufacturers is a novel thing to foreign dealers and is warmly commended here. In a few cases alterations have been made in pumps and other articles to meet local wants or fancies, with good results.

Our machine tools and hand tools continue in strong demand. By sending over poor goods a few years ago German firms irreparably injured their tool trade in this market, and they are no longer serious competitors. In the same way German cutlery concerns have failed to retain their hold here, to the great advantage of Sheffield.

In 1901 the Germans had practically all the trade in steel spoons, but this has now been taken by the Americans, who make a better article at as low a price. One Edinburgh wholesale house is doing a profitable business in these spoons, which are sold principally in the country districts.

In a variety of electric fittings, and also lamps for incandescent gaslighting of streets and parks, the Germans are offering satisfactory goods at much below American or English prices and are therefore getting an extensive trade.

A Scottish wholesale firm has scored a decided commercial "hit" with an American machine-made, single-barreled, breech-loading gun, which sells at a moderate price.

Galvanized goods, such as oil cans, are selling freely; the Americans have a share of this trade, and, in the opinion of prominent dealers, will obtain more of it if they keep their wares up to the present standard.

Apparently, we are not competing successfully with the Canadians in the churn trade, but in wood goods generally we are much ahead of them. Our supplies for bee keepers are always in demand. American handles, as well as forks, have been advanced in price for next season, yet the usual large orders are probable. "We can not do without them," said a dealer to me.

Our wood-working machinery—for planing, sawing, molding, sandpapering, etc.—has long been used in Scotland to a considerable extent. German machinery of this kind has been pushed of late in a very energetic way, and our makers and exporters must be keenly on the alert if they would lose no opportunities here.

Canadians are dividing with Americans the trade in imported lawn mowers in this part of Scotland.

There is an increasing sale of American clocks and watches of standard quality and moderate prices.

Scotland has been taking a large amount of general hardware, including enameled ware, from Germany.

Ship chandlers are handling fair quantities of American valves, ironware, and other supplies. This trade has been growing and promises to become important if the right methods are pursued. I am informed by one firm that in some instances the packing of these goods has been "grossly defective."

In furniture, roll-top desks and bookcases are still the prominent items in the imports from the United States. The desks are sold largely, notwithstanding that the local office-furniture manufacturers have copied them closely and made special efforts to keep out the foreign article.

Dealers in American shoes report an increasing trade. Our styles gain popularity and prices of the best grades are low compared with the prices people heretofore paid for home-manufactured shoes. A notable effect of the American "invasion" in this branch of trade is a general reduction of the extraordinary profits of retail dealers before the introduction of American stores. Grades of British-made shoes which sold for \$6 four years ago can now be bought for \$4.

Our leather, both sole and upper, has been imported in somewhat larger quantities than last year by British shoe manufacturers,

owing, it is said, to their increasing orders from the colonies. Not only is the British shoe made chiefly of American leather and by American machinery, but even the metal hooks and eyelets are practically all imported from the United States.

Our axes, heavy and light, are still prime favorites; neither British nor continental makers can equal them in the combined merits of excellent quality and cheapness.

American carpet sweepers have long been in this market, but the possibilities of this trade will hardly be realized except by a house-to-house canvass by energetic salesmen.

Although our paints and varnishes are as yet a small commercial item, there is a promising increase of sales. Some dealers are much pleased with the American varnishes they have been getting, as the reports from coach builders and others are highly favorable.

Our soaps, toilet and common, are used more than ever. The enterprise of American manufacturers of the better grades is notable, both in the methods of placing their goods on the market and of advertising them, and it is thought that the business will develop greatly in the near future.

American computing scales, cash registers, and other specialties have been widely sold in Scotland this year, and the agents say that there is yet a very broad field before them.

A distinct gain has been made here by our manufacturing chemists in many articles in common use and by our exporters of a variety of small goods, chiefly novelties, handled by jobbing houses. The market for novelties of every description is inviting, and success in this line depends only on putting the goods in the right hands.

German exporters of textiles have developed in this country a trade of some importance in woolen underwear.

The imported nails are principally from Germany, as are also moldings. It is needless to say that toys are mostly German, but this year many have been coming from the United States.

Our wooden ware is extending slowly and steadily, and it seems certain that if well managed this trade will attain great dimensions in a few years.

RUFUS FLEMING, *Consul*.

EDINBURGH, SCOTLAND, *November 25, 1903.*

AMERICAN TRADE OPENINGS IN AUSTRIA.*

(From United States Consul Ledoux, Prague, Austria.)

I have no doubt that a good market could be created in Austria for any improvements in the somewhat antiquated office furniture and office systems and devices generally in use. This is particularly so for this part of Austria (Bohemia), which offers an almost virgin market for modern American office furniture, systems, and devices, a market which could be made most profitable to the pioneer exporters, but which necessitates strenuous activity and a wise campaign of education on the advantage of our labor-saving office devices.

From personal investigations I must say that, however antiquated the office furniture and systems in use, they enjoy vast and solid popularity, all business and professional men being greatly attached to them, and a serious though comparatively inexpensive campaign is necessary to replace them by American office devices.

American manufacturers have in the past relied too much upon advertising in the United States. American newspapers, trade papers, magazines, etc., are not circulated in Austria, and manufacturers should take it for granted that their office devices are unknown in this country, as well as in other parts of Europe.

American manufacturers have also relied too much on local European agents for the introduction of their merchandise. These agents not only lack knowledge regarding the fortes of American office devices, but are also the agents of other concerns—American and foreign. Their efforts are thus crippled by both lack of knowledge concerning the special qualities of American devices and the necessary division of efforts to satisfy the numerous firms they represent.

If you desire to enter into foreign markets on a large scale, I would advise you to personally introduce your special line of office devices. An American agent, or drummer, speaking the language of the country and introducing only a special line, could do twice the business of any general agent, who would require either a large commission or a substantial salary and devote only a fraction of his time—supplemented by an iota of his energy—to the introduction of your goods.

If such is your intention—entering foreign markets on a large scale—I would also advise you to advertise extensively. Advertising is inexpensive in Austria, especially in Bohemia, and though

*This report was prepared in reply to an inquiry made by a furniture manufacturer of Iowa.

the newspapers have a small circulation compared to our large American dailies the advertisements have a large value, as they are generally looked for and read with a certain eagerness and relish.

If you desire to introduce your merchandise directly—that is, to sell it directly and by correspondence to the wholesalers and retailers—it is absolutely necessary that your correspondence, pamphlets, and circulars be in the language and currency of the country. It is as unwise for an American firm to try to do business in Austria with English letters, pamphlets, and circulars, with prices in dollars and cents, as for an Austrian firm to attempt the introduction of its wares into the United States with German circulars, pamphlets, and letters, giving its prices in kronen and hellers. This applies also to weights and measures.

I take pleasure in inclosing a list of the few furniture dealers and stationers selling office devices in Prague. I also beg to supplement this with the following pointers:

1. Have your correspondence, pamphlets, circulars, etc., in the language of the country to which you desire to export. Your prices should also be in the currency of the country.

2. If sold direct to the consumer your specialty should be advertised in the local newspapers, magazines, and trade papers. If sold to the wholesalers and retailers, at least advertise in the trade papers.

3. Quote net prices—*i. e.*, have your quotations include freight, transportation, and insurance charges, and in the currency of the foreign country. Quotations *c. i. f.* are the most practical for the retailers and consumers. For the wholesalers both *c. i. f.* and *f. o. b.* quotations could be used.

4. Personal contact with the buyer yields the most satisfactory results. If possible, send an experienced American representative to introduce your specialty. He must, however, be conversant with the language of the country and, if possible, with some other languages of Europe—*e. g.*, French, which is spoken in nearly all important stores and wholesale houses.

5. Call upon United States consular officers for detailed information re the markets you desire to invade. United States consular officers should be in a position to give you the address of wholesalers and retailers, the particular condition of the local market, costs of freight, terms of sale, etc. I would also advise you, as your special device takes but little room and could be used, to place samples of your merchandise at the principal United States consulates, where they could be inspected by possible buyers. Price lists, pamphlets, catalogues, etc., should also be filed at United States consulates.

The following list contains the names and addresses of some of

the principal office-furniture dealers and wholesale stationers in Prague, Bohemia, Austria-Hungary:

Office-furniture dealers.—Glokowski & Co., 17 Graben; Matt C. Steiner, 7 Heinichsgasse; Joseph Svestka, 24 Rosengasse.

Wholesale stationers.—Ignaz Tushs, 971 Melantrichgasse; A. Hause, 211 Annahof; T. B. Batovec, 852 Graben; Franz Balatka, 16 Graben; Belsky & Jeschek, 2 Wenzelsplatz; Slavik & Löbl, 234 Wachholdagasse.

URBAIN J. LEDOUX, *Consul.*

PRAGUE, AUSTRIA, *November 28, 1903.*

OPPORTUNITIES FOR AMERICAN TRADE IN AUSTRIA.

(*From United States Consul Hossfeld, Trieste, Austria.*)

I am satisfied that many of our products could be sold in Austria if a systematic effort were ever made to introduce them.

Tools and farming implements.—Tools of all kinds, as well as farming implements, are dear, clumsy, and old-fashioned in this part of Austria. Plows, especially, are far behind the times. A wide-awake farmer now and then imports an American plow, but a regular depot for such ware does not exist anywhere in southern Austria.

Furniture.—Austrian furniture is expensive and, in many respects, greatly inferior to ours. American folding beds and office furniture, roll-top desks especially, could, in my opinion, be sold here without any difficulty.

Food products.—American cheese, cornmeal, oatmeal, and our various breakfast foods should be brought to the notice of the Austrian consumer. Our canned goods are already sold here as luxuries and would no doubt find a much readier sale were it not for the high Austrian import duty on such goods, which is about 10 cents a pound.

Stationery.—American stationery is being more and more appreciated in Europe. Austria exports a large quantity of paper, but really good letter paper is exceedingly scarce here. Pens, pencils, and erasers of Austrian manufacture are likewise inferior.

Boots and shoes.—There is an opening for American shoe stores in southern Austria. The homemade article is cheap, but of poor quality, and can not compare with the American product in style, fit, or comfort, and there is consequently a growing demand for our shoes among the better classes. In view of this, I am of the opinion that the establishment of an American shoe house with both wholesale and retail departments, to be managed by an American on American principles, would prove a most lucrative investment.

Miscellaneous goods.—Other American goods, as carriages, safes, gas fixtures, typewriters, and engineering implements and supplies, could be sold here more extensively than they are sold at present if their sale were pushed.

How to build up trade.—Our manufacturers and exporters can not be told too often that flooding the continent of Europe with English circulars and catalogues is wasting time and money, and that the surest and, in the long run, the cheapest way to increase their exports is to send out competent and reliable salesmen familiar with the languages and customs of the countries in which they are expected to do business.

British manufacturers keep an army of agents abroad for the enlargement of their trade. Our manufacturers, as a rule, enter the foreign market only when business is slack and prices are low at home, and abandon it as soon as business commences to improve at home. Staple products have always been sold successfully in this fashion, probably because they are bought on their grading, and men who buy and sell at the produce exchange are, as a rule, neither overconservative nor oversentimental. But manufactured goods are largely bought on faith. Faith grows slowly and withers easily, and it is exceedingly doubtful whether the foreign dealer, who was once persuaded into purchasing American goods when trade was dull in the United States and coolly ignored when trade picked up again, will care about renewing such commercial relations. Whether business is flush or dull at home the European manufacturer never neglects the foreign market. Whatever demand there may be for his wares at home he will try hard to fill the orders of his regular "correspondents" abroad, and if the exigencies of the foreign market at times demand even the sacrifice of reasonable profits, he makes this sacrifice and charges it to insurance against hard times. If American foreign trade is to have a healthy growth United States manufacturers must learn a lesson from their German and British competitors and cultivate it in all kinds of weather.

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, AUSTRIA, *October 31, 1903.*

AUSTRO-AMERICAN IMPROVED COMMUNICATION.

(*From United States Consul Hossfeld, Trieste, Austria.*)

The "Austro-Americana" Line has acquired a number of new vessels during the past year, and has now a fleet of 19 steamers. This has enabled the company to make arrangements for a greatly improved service. There will be hereafter, besides the former semi-monthly sailings to New York, a sailing every three weeks to Philadelphia and every five weeks to Boston and Baltimore. As full

cargoes can not always be secured here, some of the ships will call on their westward voyage at Greek, Sicilian, and Spanish ports. From the United States the company will have regular semimonthly sailings from Savannah and New Orleans and monthly sailings from Galveston.

The company has recently entered into a joint tariff agreement with the Louisville and Nashville Railroad Company, in consequence of which goods from any point on that company's line will be carried to Mediterranean and Adriatic ports with only one transshipment at Pensacola. This arrangement will prove of decided advantage to our southern shippers, as their goods will be less liable to be delayed or to suffer damage in transit.

The Austro-Americana has furthermore added to its service a new line between Trieste and Veracruz, Mexico. The steamers of this line, which will also call at intermediate ports, have each accommodation for about 150 passengers.

In view of the constantly increasing flow of trans-Atlantic emigration from Austria-Hungary, the managers of the Austro-Americana have for some time been considering the advisability of adapting a portion of their fleet to the carrying of emigrants, but so far no definite conclusion has been reached. This irresolution has probably aided in bringing about the recent decision of the Cunard Company to have some of its passenger steamers ply, during the coming winter, between New York and the principal ports of Italy and Austria-Hungary for the transportation of second-class and steerage passengers, at rates which promise to compete successfully with the northern lines. The steamers have been fitted for carrying each 1,000 steerage passengers, besides several hundred saloon passengers, and will make the trip from Trieste to New York in twenty days. They are said to be superior emigrant ships, being even equipped with Marconi's system of wireless telegraphy. The first ship of the new line is advertised to leave here on November 10.

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, AUSTRIA, *October 31, 1903.*

HOW TO BUILD UP AMERICAN TRADE IN BOHEMIA.

(From United States Commercial Agent Twells, Carlsbad, Austria.)

CARLSBAD CONSULAR DISTRICT.

The consular district of Carlsbad is situated in the northwestern corner of the Kingdom of Bohemia, Austria, and is the most productive portion of Austria, gold and salt being the only two minerals which are not found here. Gold was found in small quantities a

long time ago at Eule, in Bohemia, but in quantities too small to make it worth the trouble and expense to obtain it.

Bohemia is divided into districts of administration (Bezirkshauptmann) and law court districts. The chief of all the courts of administration is the governor of the country (Stadthalter) at Prague, while the chief law court of the country is the supreme court of justice (Oberlandesgericht) at the same place.

The Kingdom of Bohemia covers an area of 19,980 square miles, and, according to the census of 1900, has a population of 6,318,280 inhabitants, of which three-fifths are Czechs and two-fifths Germans.

The greater part of the Carlsbad consular district is situated in the German part of Bohemia.

OPENINGS FOR AMERICAN TRADE.

Although I have not yet been quite a year in this place,* various observations and investigations lead to the conviction that a profitable export trade from the United States to the towns and villages which now belong to the consular district of Carlsbad might be possible and profitable. Therefore it would be worth trying to introduce American machinery (agricultural, engineering, and mining), tools, electrical goods, leather, shoes, canned and dried fruit, prepared meat, oils, cotton, sanitary supplies, etc., into this country, direct to the manufacturers, corporations, and population of the district. Hitherto I have not yet found two manufacturers or merchants in my consular district who get goods direct from the United States, and it appears to me that the manufacturers and merchants of the United States have not yet become aware that many classes of their goods could be sent to this part of Austria and find ready sale.

The commercial importance of this district is shown by the inclosed list† of the various industries which exist and flourish in it.

The list shows that the consular district of Carlsbad is one of the most productive on the European continent. Considering how desirous most of the corporations are to improve railway traffic and sanitary arrangements; gas, electric-light, and water works; the development of agriculture, gardening, and foresting; the endeavors and anxiety shown by the wealthy Austrian nobility to get hold of the most approved agricultural inventions so as to obtain the best results, I am convinced that if this district receives the attention it deserves from our enterprising American manufacturers and merchants a profitable trade may be built up. It may be well to make a few suggestions in reference to the manner of how business should

* The commercial agency at Carlsbad was established in 1902 and Commercial Agent Twells was appointed to the office on October 7, 1902.

† This list, covering the industrial centers of the Carlsbad district (a large portion of Bohemia), is too long for publication, but is placed on file in the Bureau of Statistics for reference.

be started here which may save our merchants much unnecessary expense and trouble.

HOW TO BUILD UP AMERICAN TRADE.

The manufacturers and merchants of this consular district are generally hard-working, honest merchants and it is comparatively seldom that one of them becomes a bankrupt; but if he should, then he is considered almost an outcast by the social circle in which he moves. The moment the decree of bankruptcy has been issued by the law courts he has to give up his social position. The postal authorities stop all mail and parcels addressed to him and hand it over to the solicitor who has been appointed by the court to wind up his estate. In fact, the law is so severe that a bankrupt is imprisoned if the criminal investigations which are instituted in each case of bankruptcy show that he is to blame for not being able to pay his creditors, and if the latter do not agree to give up part of their claim he remains their debtor, even after his estate has been wound up and in spite of his being discharged, until the debts are paid in full. He is, therefore, in fact ruined and unable to begin business again in any part of Austria without having his goods seized.

This is the reason why merchants are so careful when ordering goods. They will not take risks and will only buy small quantities. This is one of the principal causes why Americans have hitherto done so little business in Austria. According to the American mode of doing business, our merchants and manufacturers sometimes offer their goods in large quantities, stating that these are the smallest lots they sell. They lose trade in consequence thereof, while other nations profit thereby. Therefore, our manufacturers and merchants will have to adopt another style of trading with this part of Europe if they wish to introduce business here. In the beginning they must be satisfied with selling small quantities and obtaining small orders. The nonobservance of these trade customs is the reason, in a large degree, attempts to introduce agricultural machinery, shoes, etc., have failed.

There is another cause why a number of American productions which could be introduced into the market of this district have very little or no sale here. American manufacturers and exporters frequently answer inquiries from Austria: "Please apply to our Hamburg or Berlin agent, as he covers your district." American manufacturers seem to overlook the fact that the consular district of Carlsbad, with its innumerable industrial trade centers, is in Austria and not in Germany, and although politically closely related, all goods exported from Germany into Austria, and vice versa, are subjected to high duties; therefore, Austrian merchants are unable to import many classes of goods from Germany. During the past

twenty years quite a number of German manufacturers have established branch factories in this country for the reason that German goods can not be exported to Austria on account of the high duty, and various English firms have likewise lately opened branch houses in Austria to make their trade independent of their Hamburg and Berlin agencies. Comparatively little, however, is seen of American enterprise in this district, although many American products could be introduced, because in spite of the duties they are cheaper and better than the home products.

Even in those cases where agents from Germany find it possible to sell American goods in this district the trade is not advantageous to us. While Austrian merchants buy American goods from Germany, they would prefer to get them direct from the actual producer. American trade with Austria should be conducted direct with the Austrian merchants and manufacturers wherever possible.

CREDITS AND COLLECTIONS.

It has frequently been asserted that continental firms give, as a rule, much longer credit than Americans do, and that this is to a certain extent the reason Americans can not compete in the markets here.

According to my observations, there are certain firms, especially in the toy, fancy-goods, and wine and spirit trades, who will give six, nine, twelve, or even eighteen months' credit; but buyers who ask for such long credits are not, as a rule, first-class or even second-class merchants, and it is no advantage to do business with them.

It is a rule in this district that good firms pay cash within thirty days after the arrival of the goods, or sign three or four months' negotiable bills. The Austrian banks interested in the sugar, oil, iron, corn, etc., trades, or which own such concerns, with few exceptions sell their goods only against thirty days' cash after delivery or three or four months' bills. On this subject I would like to call attention to the fact that a properly drawn up bill of exchange according to the Austrian law entitles its holder to exceptionally quick proceedings in case of nonpayment, but such a document must contain all the requirements which are prescribed by the Austrian law; and an ordinary Austrian bill of exchange, in order to be acknowledged as such by the Austrian legal authorities, should read as follows:

\$2,240.

NEW YORK, *November 1, 1903.*

Three months after date, pay against this bill of exchange to the order of ourselves the sum of two thousand two hundred and forty dollars American currency, value received in [goods, money, account]. No advice necessary.

ROGERS & CO.

Messrs. KRAUSE & Co.,
Carlsbad, Austria.

Accepted by Messrs. Krause & Co.

In this bill Rogers & Co., of New York, are sellers and drawers, Krause & Co., at Carlsbad, the purchasers and debtors; the latter have to sign the bill by crossing it or signing it with the words "Accepted, Krause & Co."

A bill thus drawn up enables exceptionally quick legal proceedings in Austria if it is not paid when due; but if one of the important words is omitted, as, for instance, the necessary words "bill of exchange," then the document is not a bill of exchange in the meaning of the Austrian law and ordinary proceedings must be resorted to in case of nonpayment.

BUSINESS STANDING OF MERCHANTS.

In regard to the solvency of merchants in my district, I believe I can safely say that the better class of them are, generally speaking, in good circumstances. It is easy, however, to find out how a manufacturer or merchant stands financially. Austrian merchants and manufacturers like to possess real estate, viz, factories, houses, freehold grounds, etc. Every piece of freehold or real estate must be entered in the books of the public mortgage office (Grundbuch) and all liabilities, viz, mortgages, rights, etc., must likewise be entered therein, or else there is no claim against the estate for the respective debt. Every respectable man, whether an Austrian subject or foreigner, may go to the public mortgage office and look through the book in which the property of the person in whom he is interested is entered, and he, or a person authorized by him, can see what debts are entered on the property of the debtor or merchant with whom he wants to do business. No Austrian bank or savings bank will discount the bills of a merchant or manufacturer who owns real property without obtaining the above details from the mortgage office.

Banks and the richest people of the towns have generally no mortgages on their estates. If a merchant has half the value of his real estate covered by a mortgage from a savings or other bank, he is still considered in good circumstances. The higher the mortgage is above the amount loaned by the bank, the less credit he is able to obtain in the conduct of his business. All this may be seen, free of any charge, at the public mortgage offices.

AGENTS FOR AMERICAN PRODUCTS.

The best way to do American business here would be to appoint special agents for this district, or to engage the services of a firm established at Vienna or Prague for that purpose. Some English and German firms have found that it pays to have an agent for North Bohemia only, and as the Reichenberg district, which covers the well-known Bohemian glass, bead, fancy-jewelry, and woolen-goods districts, is situated in northern Bohemia, there is a large

industrial territory there which might justify the appointment of special agents for certain lines of goods.

The bathing places in my consular district are annually visited by about 6,000 Americans, and thus American merchants coming here to sell goods will find a class of people who have some knowledge of American social habits.

It is advisable for Americans who wish to do business here to be in possession of passports, as the post-offices, banks, and authorities will not recognize a foreigner's name or person unless he shows a passport.

RIGHTS OF AMERICANS.

Americans, native or naturalized, may open business places, factories, coal mines, etc., wherever they like in this district, and enjoy the same commercial rights and privileges enjoyed by Austrians.

CARLSBAD, AUSTRIA, *October 31, 1903.*

JOHN S. TWELLS,
Commercial Agent.

AMERICAN COTTON-SEED OIL IN AUSTRIA.

(From United States Consul Hossfeld, Trieste, Austria.)

The imports of cotton-seed oil from the United States decreased from 161 metric tons in 1901 to 120.4 metric tons in 1902, in consequence of the great increase in price of this article. Cotton-seed oil is used extensively here as a table oil, but the prices at which it has been held during the past two years have placed it beyond the reach of the poorer classes and cheaper oils took its place to some extent.

The import duty on cotton-seed oil is \$1.96 per 220 pounds. It is proposed by the Government to increase this duty to \$8.12 per 220 pounds, which would be absolutely prohibitive. The advocates of the proposed increase have always asserted that it is necessary for the building up of the home oil industry. It would, however, be difficult to substantiate such a claim. Olive oil never has been and probably never can be produced in Austria-Hungary in sufficient quantities to supply the home demand for table oil, and its cheaper substitutes, such as rape-seed oil and sunflower-seed oil, are rejected even by many of the less fastidious as unfit for human consumption.

Attempts have been made to import the raw material and produce cotton-seed oil in Austria, but all such attempts have failed because the cotton seed suffers by the long sea voyage and the quality of oil produced therefrom is greatly inferior to the American product. Experiments made with Egyptian cotton seed, which

does not seem to undergo chemical changes during the comparatively short journey from Egypt to Austria, have shown that it is not fit for the manufacture of edible oil.

Furthermore, it is not at all probable, if the cotton-seed-oil industry were undertaken here, that a profitable market could be found in Austria-Hungary for the oil cake, which is so important a by-product of the cotton-seed-oil industry, inasmuch as its yield constitutes from 85 to 90 per cent of the weight of the raw material. Serious doubts must therefore be expressed whether the proposed imposition of a prohibitive import duty on cotton-seed oil would in the long run accomplish its purpose.

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, AUSTRIA, *October 31, 1903.*

AMERICAN RAPID-FILTER PLANT FOR TRIESTE.

(From United States Consul Hossfeld, Trieste, Austria.)

The source of the municipal water supply of Trieste is the "Aurisina Springs," situated on the seashore at the foot of the Karst Mountains, about 8 miles from the city. Ordinarily these springs furnish a clear and wholesome water, which hardly needs filtration. But during the rainy season this water is apt to become impregnated with clayey matter, which could not always be removed by the filter plant hitherto in use.

In January, 1901, the Jewell Export Filter Company, of New York, secured a contract to construct a filtration plant on the "American rapid system." The new plant was erected about 460 feet above the Aurisina Springs, on the steep slope of the Karst Mountains, where the required space had to be obtained by extensive blasting. It consists principally of the following items:

1. Three settling basins of an aggregate capacity of 1,800 cubic meters (63,568 cubic feet).
2. The filter house, containing six Jewell filters, each 17 feet in diameter.
3. The clear-water reservoir below the filter house, with a capacity of 1,400 cubic meters (49,442 cubic feet).
4. The engine room, containing pumps and motors.
5. The chemical apparatus.

The water is pumped up from below into the settling basins, the coagulant (alum) being added shortly before it enters them. From the settling basins it enters the supply pipe in the adjoining filter house, thence the filters themselves, and, after having traversed the filters, flows into the clear-water reservoir underneath, the rate of

flow being kept constant by an exceedingly ingenious American contrivance, viz, the "Weston controller." From there it is conducted to the two distributing reservoirs in Trieste.

The capacity of the plant is about 15,000 cubic meters (529,740 cubic feet) per day. The filter tanks are of steel and the filter beds consist of about 300 tons of sand, which was brought from the United States. The beds are periodically washed by a reversion of the stream. Clear water is pressed through them from below, while the sand is at the same time mechanically stirred. The agitators are driven by two benzine motors of 30-horsepower each, a third motor and a second pump serving as reserves in case of accident. The alum solution is stirred by means of a small air compressor and fed into the raw water by gravity and by means of ingenious appliances, securing constancy of supply. The various buildings are constructed of concrete and steel and are illuminated by electricity.

All the parts pertaining to the filters proper and to the chemical apparatus, with the exception of the steel filter tanks, were manufactured in the United States.

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, AUSTRIA, *October 31, 1903.*

AMERICAN FRUIT IN BELGIUM.*

(*From United States Consul-General Howe, Antwerp, Belgium.*)

PRUNES.

In France the prune crop failed totally. California had a magnificent crop, both as regards quality and quantity, which fact made prices reasonably attainable. California prunes enjoy great favor in Belgium, and it is more than probable that they will end by dethroning the prune of Ente on the Antwerp market.

It is to be regretted that certain American houses ship cases bearing a mark other than that of the origin of the fruit that they contain—known as "blind cases"—which enable certain packers to put "Santa Clara" (the preferred mark) upon cases containing fruit of less value.

EVAPORATED APRICOTS.

California constantly kept the prices very high, though this was not justified by the abundance of the crop. This affected the consumption, and purchases did not attain the figure which the crop seemed to promise.

* Extract from Consul-General Howe's annual report, which will be printed in full in *Commercial Relations* for 1903.

EVAPORATED APPLES.

The first shipments of apples toward the close of 1902 were unsatisfactory. Shippers in the beginning thought they could demand higher prices than actually prevailed. Thus, toward the end of the season low prices prevailed, but finally they rose slightly by reason of a more active demand for consumption. The Antwerp Chamber of Commerce in its report reproaches New York shippers in the same way as those of California for shipping what are called "blind cases," prejudicing honest trade to the advantage of unfair competition.

ANTWERP, BELGIUM, *October 30, 1903.*

CHURCH HOWE,
Consul-General.

AMERICAN PRODUCTS IN CENTRAL FRANCE.

(From United States Commercial Agent Griffin, Limoges, France.)

LIMOGES INDUSTRIAL EXPOSITION.

The industrial conditions in central France are very promising. Much encouragement and impetus have been given to trade by a regional exposition held in Limoges from May 1 to November 1, 1903. Attention was called to this exposition in a previous report sent from this office.*

A large number of manufacturers from Germany, Belgium, Great Britain, and a very few from the United States exhibited their goods with satisfactory results. German lithographic machinery was extensively advertised and the exhibitors succeeded in interesting many of the buyers of such goods in this section.

It is very unfortunate that the display of American agricultural machinery and implements was so small and so unattractively placed in this great center of agriculture. The mowers and reapers exhibited were considered in every respect superior to others and were awarded the first prizes.

The demand for traction engines was surprisingly large, only those of French manufacture being exhibited. The sale of such machines is constantly increasing.

A large number of all kinds of vehicles was sold, such as wagons, carriages, carts, etc.

AMERICAN VS. FRENCH VEHICLES.

The fault found with American vehicles is that they are too light. As a rule the wheels are not solid enough and the tires too narrow for service in this country, as it is customary in France to load

* Printed in ADVANCE SHEETS No. 1629 (April 24, 1903).

wagons much more heavily than in the United States, the roads being smoother and better. Every vehicle, even of the lightest kind, is supplied with a brake. American manufacturers have too often omitted this important and necessary article on all kinds of wagons, carriages, etc., when sending them to France or even exhibiting them in France. The comparative cost between French and American carriages of the same class is about one-half in favor of the American. There is certainly an opportunity for opening a good trade in American-made vehicles in France.

SPOKES, HUBS, AND FELLIES.

At present the demand for spokes, hubs, fellies, etc., is large. Hickory spokes are preferred for cabs and ordinary carriages, and oak spokes for large, heavy drays and wagons. If American representatives of these goods solicited orders in France, their sale could be increased considerably.

STAVES.

Staves and handles are always in demand. There has been a change made lately, to a limited extent, in the transportation of wines, alcohols, and other liquids. Instead of putting them in the ordinary sized barrels of 200 to 300 liters (52.85 to 79.25 gallons) they are shipped in huge tuns containing from 10,000 to 20,000 liters (2,642 to 5,284 gallons). This method of shipping reduces the cost of transportation and creates a demand for especial kinds of staves, the usual dimensions of which are: Length of staves and diameter of tun, 2 meters (78.7 inches); contents, largest tun, 20,000 liters (5,284 gallons); medium tun, 15,000 liters (3,962 gallons); smallest tun, 13,000 liters (3,434 gallons).

Some of these tuns (foudres) are made of enameled iron, placed on stationary platform cars and transported from one place to another without being removed; their dimensions are approximately the same as those given above.

The figures given of the importation of staves into France for 1901 are 121,000 metric tons, of which over 90,000 tons came from Austria-Hungary and 21,000 tons from the United States.

It is further stated that the supply of Austro-Hungarian wood is declining and becoming difficult of access; therefore the price of this commodity will increase.

The stave business deserves especial attention on the part of the American producer, as it promises a fine field for future development.

AMERICAN SHOES AND SHOE MACHINERY.

The United States still leads in the manufacture of shoes and shoe machinery. The best leather, machinery, threads, and all other furnishings for shoe making are imported from the United States.

It is surprising to notice the gradual change that is taking place in shoe shapes. The striking peculiarities that characterized French shoes ten years ago are rapidly disappearing and American shapes are now found everywhere. The model lasts are imported in large quantities from Massachusetts and are extensively copied throughout France.

The largest shoe factory in France uses only American machinery. The growth of this manufactory is phenomenal. Before the Paris exposition of 1900 this factory was a very small one, employing only French machinery. Since then it has increased until it is now the largest in the Republic.

The American shoe machinery exhibited at the 1900 exposition at Paris was bought in block by this firm and to-day its annual sales run up into the millions of francs. Two enormous new buildings have been erected within two years and more than 1,000 hands are constantly employed. This manufacturer imports the following articles direct from the United States annually: Kid and other leather, \$62,918; shoe findings, etc., \$1,737; stains, cements, inks, etc., \$1,967; and pays a monthly royalty on machines of \$3,185. If these figures be multiplied by three it will give the approximate amount of shoe fixings imported into this city (Limoges) by the shoe manufacturers yearly—say, about \$209,424. This is a good illustration of what may be done by intelligent representation of American machinery and goods.

American manufacturers should remember that conservative peoples, no matter how inferior their methods may be, must be carefully taught how to employ new inventions, which must be shown to them before they will purchase.

There are six large factories making shoes in Limoges that now use American machinery, and many other like factories are being started in other parts of France, to be furnished with American machinery also.

AGRICULTURAL MACHINES AND IMPLEMENTS.

The difficulty farmers have in obtaining hand labor and the tendency of the laborers to drift toward industrial centers increase the demand for labor-saving machinery. Other countries may endeavor to snatch this important trade in agricultural machinery and implements from American manufacturers, but they can only do so when and where Americans are unwilling to study the peculiar conditions and requirements of the French farmers. Little details and peculiarities that may often seem useless and trifling to American manufacturers are, on the other hand, just the requirements necessary for successful sales.

The foreign competitor succeeds because he satisfies the buyer, often giving him an inferior article but letting him have his own way in these small matters. The manufacturer from the United States may be conscious of the superiority of his merchandise and still fail to sell because he lacks adaptability. Sometimes a little paint and more care in polishing journals are considered; then, again, the machine may not cut at the required height, etc. These adaptations can be easily made, and the market may be won thereby.

AMERICAN HORSES FOR THE FRENCH CAVALRY.

Numerous inquiries have been made at this office by Americans concerning the demand for horses from the United States and several horse dealers have requested information on this subject.

Limoges is the headquarters of the Twelfth Army Corps, and the horses of the light and heavy cavalry need renewing constantly, as the life of an army horse is only five years of active service.

A number of American horses have been introduced into France for cavalry service; some have not given satisfaction because they were pressed into service before they had become acclimated. It usually takes a foreign horse the greater part of a year in France to get into good condition, especially if he comes from the western plains without being trained.

This business could be greatly developed by intelligent and painstaking efforts. The particular requirements of the French market should be followed, such as the height, weight, etc. French horse breeders are exporting many horses to Russia for her army, and horses are consumed as food in all European countries. This branch of the trade is very remunerative all over this Republic.

FRUIT.

Canned and dried fruits.—Foreign canned and dried fruits were scarcely known in France a few years ago; to-day there is hardly a grocery of any importance in any French town but has American dried fruits on its shelves.

Already complaints are heard in France about the inroads made on the home trade by these foreign fruits, but careful investigation shows that the sales of French goods are practically the same as they were before the advent of the Americans in this market. French taste is changing; far more people use dried and canned fruits now than ten years ago. The prices of these so-called luxuries have been so greatly reduced as to bring them within reach of classes that could not enjoy them before the introduction of the foreign products.

Fresh fruits.—The French markets are beginning to abound in fruits that formerly were unseen, or very rarely seen. Bananas and

pineapples are no rarity now; nearly every fruit store sells them. Bananas shipped from the West Indies are on sale in Paris and other large cities. The time is not far distant when the fresh fruits of Florida and California will be as common in French cities as they are now in New York.

WALTER T. GRIFFIN,
Commercial Agent.

LIMOGES, FRANCE, *October 28, 1903.*

AMERICAN GOODS IN FRENCH INLAND CITIES.

(From United States Consul Nason, Grenoble, France.)

Among the new buildings and other city improvements of Grenoble during the year just past, another "department store," on a large scale, made especially attractive and presenting many modern features, is worthy of notice. While it follows the lines of similar stores in French cities, it is noticeable that its goods, varied as they may be, are yet almost wholly "made in France."

It is lacking in a hundred and one commodities which go to make up "all the comforts of home" in the United States. Asked wherein it differed from an American store of the same class, I could only say, "In its limitations. It lacks the products of other countries, of the world in general, and of those of the United States in particular."

How to introduce American goods into these inland cities?

Correspondence, the placing of circulars, the securing of merchants' names, even the occasional visitations of agents or exposition of scattered samples are slow processes at best. People will look with semicuriousness at an American washtub and clothes wringer and proceed to hammer their clothes at the water basin in the same old way.

I have often thought as American dentistry has planted itself in European cities and demonstrated the quality of its work by daily practice, so the planting of American stores, on a smaller or larger scale, with specific American goods—household utensils, furniture, tools, garden and field implements, shoes, threads, tongs, stove handles—scores of things I could name, would demonstrate their ability to "meet long-felt wants," and assure to their promoters an ever-increasing patronage.

Even with French high-tariff restrictions, I believe this could be successfully done, while at the same time it would stimulate native dealers to search after and keep on hand more and more of our goods.

C. P. H. NASON, *Consul.*

GRENOBLE, FRANCE, *November 2, 1903.*

AMERICAN GOODS IN NORTHEAST FRANCE.

(From United States Consul Prickitt, Rheims, France.)

The best way to sell American goods in this part of France is to establish a general agency at Paris and work the surrounding territory by means of traveling or local agents.

In this manner more goods can be exported at one time and much lower rates of transportation secured. Have the catalogues and advertising matter printed in French, and have capable men, familiar with the goods, for agents. The Paris agency of an American typewriter company has established a local agency at Rheims during the past year. It has an excellent agent, who has succeeded in selling many machines. The breakfast foods "force" and "Quaker oats" have been placed on sale at one of the finest grocery stores in the city. The paper boxes containing the cereals are printed on all sides with statements describing their merits, directions for use, etc., in the French language. A little pamphlet in French is given to each customer. These goods, owing to the way they are being pushed, are having good sales. American evaporated fruits, particularly apples and apricots, are having increased sales. Very inferior native apples are selling at retail in the markets at this date at 5 cents a pound, owing to the failure of the apple crop. There is a heavy duty on apples for the table—\$2.90 per 220 pounds.

During my administration as consul I have explained many times why the merchants here do not import directly from the United States. The difference in the money, weights, and measures and the absence of a port of entry make it very difficult to establish direct communication between would-be sellers in the United States and purchasers at Rheims. I have succeeded in doing this in a few instances, but even after one or two sales were made the seller lost the trade because he had no one on this side to look after it. The commercial traveler is always in evidence, and the solicitor for trade on the spot, who has something which he declares "just as good or better" than the article furnished by the absent seller, is almost sure of success. As a rule, competition is now so great that trade must be continually looked after in order to keep it.

But the most difficult thing to do in France is to introduce an article to which the people are not accustomed. It will not do to count on selling things in France because they are popular in the United States. Here is a case in point:

Almost all articles of use are well made in France, for they are made to last and to do good service, but the article is often made

INCOMPETENT SEAMEN.....
 INDIAN-AMERICAN TRADE.....
 INDUSTRIAL DEVELOPMENT IN SCOTLAND.....
 INTERNATIONAL EXPOSITION AT NANTUCKET.....
 INTRODUCING AMERICAN TRADE IN INDIA.....
 IRON WORKS OF RUSSIA.....

JAPANESE INTERESTS IN SIBERIA.....

KAOLIN DEPOSITS IN ST. CHRISTOPHER.....
 KOREANS IN RUSSIAN GOLD MINES.....

LEAD MINES IN IVIZA.....
 LIMOGES PORCELAIN AND CHINA WARE.....
 LONDON AND PARIS CAB COMPANIES AND TRAMWAYS.....
 LUMBER INDUSTRY OF MANCHURIA AND KOREA.....

MACHINERY WANTED IN CORNWALL, ONCE.....
 MANGANESE INDUSTRY IN THE CAUCASUS.....
 MERCANTILE FLEET OF JAPAN.....
 METAL-WARE TRADE OF BULGARIA.....
 MEXICAN INSPECTION OF FOOD AND OTHERS.....
 MOTOR ROADS OF THE FUTURE.....
 MOTOR SERVICE ON AUSTRIAN RAILWAYS.....

NEW GAS-GENERATING PLANT.....
 NEW HIGHWAY OF COMMERCE IN PERU.....
 NEW MEXICAN RAILWAY.....
 NEW MINING LAW IN COLOMBIA.....
 NEW MONETARY LAW OF COLOMBIA.....
 NEW PORT OF ENTRY IN VENEZUELA.....
 NEW PATENT LAW OF MEXICO.....
 NEW PROCESS FOR MANUFACTURE OF STEEL.....
 NEW SYSTEM OF MEASURING CRIMINALS.....
 NICKEL DEPOSITS OF ONTARIO.....
 NORWEGIAN COD-LIVER OIL.....
 NOTTINGHAM LACE AND HOSIERY TRADE.....

OPENING FOR AGRICULTURAL MACHINERY.....
 OPENING FOR AMERICAN TIN PLATE.....
 OPPORTUNITIES FOR AMERICAN TRADE IN AFRICA.....
 OVERPRODUCTION OF STAVES.....

PETROLEUM AS FUEL.....
 PINE LANDS OF HONDURAS.....
 POTATOES IN FRANCE.....
 PREFERENTIAL TRADE IN AUSTRIA.....
 PREVENTION OF ACCIDENTS FROM LOCOMOTIVES.....
 PREVENTION OF FIRE FROM LOCOMOTIVES.....

AMERICAN GOODS IN FRANCE INLAND CITIES.

At the new "Exposition" and the city departments of Greater Paris, the year just past, another "department store" on a scale of magnitude especially attractive and presenting many modern features, has been noticed. While it follows the lines of similar French stores, it is noticeable that its goods, varied as they are, are almost wholly "made in France."

Among a hundred and one commodities which go to make up the "assortments of home" in the United States. Asked to compare it with an American store of the same class, I could find many limitations. It lacks the products of other countries, in general, and of those of the United States in particular.

To introduce American goods into these inland cities, the placing of circulars, the securing of merchandise, even the occasional visitations of agents or expositions, are slow processes at best. People will look at an American washtub and clothes wringer, but they will wash their clothes at the water basin in the same old way.

American dentistry has planted itself in the quality of its work by daily demonstrations on a smaller or larger scale of its utensils, furniture, threads, tongs, stove, and so on, to demonstrate their value to their promoters.

There is no doubt that this could be done in a more systematic manner.

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too heavy. For example, all vehicles last for a long time, but the owners do not see that they are using up their horses much more quickly by adding unnecessary weight to their loads. The roads are perfect, yet the business wagons and carriages are made heavy enough to carry three times the weight that is ever put upon them. But if one tries he will find it very difficult to sell lighter vehicles for business or pleasure.

I am fond of driving and I thought I would show the people here how much superior an American buggy is to their heavy and uncomfortable carts. In 1901 I imported an American phaeton weighing 440 pounds, which would be considered heavy in the United States. It is an up-to-date carriage with leather top, rubber tires, and self-oiling axles. I was sure that I could easily sell it if I concluded not to keep it. I reckoned without my host. The freight and duty from New York to Rheims was \$100, which shows that carriages should not be imported singly. I was astonished, for I had not figured on over one-half of that amount. But I said, "Never mind! I will give these people an object lesson." I have given the lesson, but without effect. I wish to sell, for I have found that I can not afford to keep a horse and carriage. It is no trouble to sell a horse, but the phaeton is still in my possession. I have offered to sell it at a bargain. I have advertised it in the newspapers. I have pointed out that if a bicycle weighing 25 pounds will carry a heavy person safely thousands of miles, it is entirely inutile to use a carriage weighing half a ton to carry two persons. I have explained that it is on account of the heavy vehicles that so many of the horses here are knee sprung. All this has no effect; the people are not accustomed to light carriages. They look at my phaeton, shrug their shoulders, and say, "Pas solide."

WM. A. PRICKITT, *Consul.*

RHEIMS, FRANCE, *October 24, 1903.*

DRAWBACKS TO AMERICAN TRADE IN CENTRAL FRANCE.

(From United States Consul Covert, Lyons, France.)

No particular change can be recorded in the business between the United States and this consular district since I advised the Department on this subject one year ago. As often before stated, most, if not all, of the business is done through Paris houses, which have a number of agents in this city. Men who handle American goods express the opinion that if a special agency for our manufactures

were opened in Lyons, where our products could be seen and examined and orders given for them, the business would be greatly increased. Commercial transactions between the United States and France are hampered by many restrictions. Men who handle German goods state that the difficulties in the way of receiving American products are almost prohibitive. An American who was here studying the Lyons market this summer writes me from London that a Frenchman who has a house there and in Paris told him that he sold German manufactures all over France, but that "he sold nothing from the United States in France on account of the many restrictions placed upon imports from our country, especially on pipes and fittings." Just what the nature of these restrictions are I am unable to tell, as Lyons is not a seaport and no American products come here except through firms in the seaboard cities or in Paris.

It is also impossible for me to state the volume of business transacted between this consular district and the United States, as American products reach Lyons through a seaport in another consular district and no separate account is kept of them.

As set forth in detail in a report from this consulate dated August 31,* the manufacture of silk in Lyons not only maintains its former position as the first silk city in the world, but is slightly in excess of preceding years. The qualities produced are chiefly of the cheaper mousselines and the finest fancy silks and velvets. The greater part of the velvet that goes to the United States is of a cheaper variety, made by machines. Our manufacturers could produce such goods as cheaply as the French, as we have the same machines and our working men and women can make them turn out more work than those of any other country.

Many American tools are sold here, all coming through Paris, and they are preferred to similar goods from any other country. One dealer here tells me he has orders for a greater number of American-made tools this year than ever before. He says he sells American brace drills, carpenter's braces, clamp pipe drills, extension bits, ratchet drills, ratchet clamp drills, bolt cutters, handles for dies for cutting threads or bolts, taps, diestocks, thread tools, tool holders for planers and lathes, drill handles, bars or tool holders, chucks, callipers, dividers, revolution counters, spirit levels, wrenches, pipe tongs, and cutting pliers. He thinks the sale of these articles is on the increase in Lyons.

I saw engravings of all the above-named articles in a pamphlet at the house of Vve. F. Gacon, 21 Quai de la Charité, in this city. The manager of the house told me that he could dispose of and use

* Printed in DAILY CONSULAR REPORTS No. 1778 (October 19, 1903).

large quantities of the products of American industry if it were easier to obtain them. He spoke of an agency for American manufactures at Antwerp, but that is not near enough to Lyons. Last year he bought 70 tons of gas pipe from Germany which he would have bought from Americans if they had an agency in Lyons. He said that about 2,000 tons of gas pipes are sold in Lyons yearly.

Importers and men who wish to be importers of American goods in the center of France complain that the products of the United States pass through too many hands and pay profits to too many individuals before reaching the French consumer. Chicago hams come here through England, where they are smoked, bearing the mark "Jambon de York," and are consumed as English hams. A merchant in the pork business stated in this consulate one day that, of his knowledge, sausages had been received in Lyons from Chicago and reshipped to New York and other places as the famous "Saucisson de Lyon." Caviare is sent from Sandusky, Ohio, to Hamburg and St. Petersburg, where it is packed in small tin cans and sold all over Europe as "prime Russian caviare."

If a few Americans would combine and establish an entrepôt here in Lyons, more for machinery than anything else, they would find a large output for their goods. Brought directly to a French port, to Marseilles or Havre, and shipped to Lyons by water, with no warehousing charges and no profits to a number of middlemen, the goods could be sold cheaper, the consumption would increase, and Americans would enjoy the reputation for their products which they rarely do at present. The sale of one article for a firm, a company, or a country ought to open the way for a general demand for the same or other goods, provided the seller is credited with the goods sold. But if the merchandise is credited to another country, as much of ours is, and is of a superior article, the merchants of that country must reap a reward which does not belong to them. In passing through the streets of Lyons one frequently sees the word "American" before large stores in which there is absolutely nothing that came from our country. Yet men purchase in such stores thinking they are buying American goods. The ice-cream freezers, small refrigerators, sausage grinders, agricultural implements, sewing machines, cash registers, bicycles, and some other products of Yankee ingenuity are sold in a number of places in the city and are genuine American manufactures.

JOHN C. COVERT, *Consul.*

LYONS, FRANCE, *October 28, 1903.*

GALVESTON-NEW ORLEANS-DUNKIRK STEAMSHIP LINE.

(From United States Consul Atwell, Roubaix, France.)

A direct line of steamers between Galveston, New Orleans, and Dunkirk, sailing monthly, has been inaugurated during the past month. This service will facilitate in great measure the entry into this consular district of cotton, grain, oil cake, and other products. The sailings will be more frequent as the trade increases.

I am advised that manufacturers and merchants of Lille desire to deal direct with cotton firms in the United States and have their shipments made to Lille via Dunkirk, thus avoiding high freights between Havre and Liverpool, the principal ports from which they have thus far received supplies of raw material.

Mr. C. J. King, United States consular agent at Lille, has received requests from reliable merchants in Lille to be put in communication with responsible cotton firms in New Orleans and Galveston. Cotton firms desiring to be represented at Lille should correspond with Mr. King, who will put them in communication with Lille firms. Requests have also been received for the address of export firms dealing in linseed oil and resin.

Information is requested as well by a Lille firm dealing in gasoline and other explosive oils for automobiles, with an agency in Madagascar. The oils are to be shipped from New York, Boston, or Philadelphia to Madagascar.

W. P. ATWELL, *Consul.*

ROUBAIX, FRANCE, *November 28, 1903.*

OPENING FOR AMERICAN TIN PLATE IN FRANCE.

(From United States Consul Ridgely, Nantes, France.)

It is believed here that the time is now opportune for introducing American tin plate into France. There are two manufactories of tin plate at Nantes and they are both prosperous. One of them, though belonging entirely to French owners, is in the hands of British operatives. British methods of manufacture are almost exclusively followed in both factories.

This year, in spite of the high tariff duty (\$2.70 per 220 pounds) and in spite of the increased demand for tin plate, on account of the failure of the sardine catch, British tin-plate exporters have managed

to sell considerable quantities of tin in this market. They are governed by French prices, which they follow very closely, or, if they undersell the local manufacturers, the difference is very small. There is a popular idea that the British product is better than the French, and this helps the British exporters. In any event there is a large and constant demand in western France for tin plate, and here in Nantes the consumption for the manufacture of cans and boxes used in the preservation of fish, vegetables, and other alimentary products is enormous. If the matter interests any of our tin-plate manufacturers I can furnish the name of an energetic and reliable Frenchman who would like very much to enter into relation with some of them. Tin plate could be shipped to Nantes either via Havre, Bordeaux, or Antwerp and it would be easy to ascertain in New York the cost of transportation. As stated above, the customs duty is \$2.70 per 220 pounds, and there are no other entry charges of any importance.

I append a price list of the French tin-plate manufacturers now in effect at Nantes, with French dimensions, quantities, and prices reduced to American equivalents. From these prices buyers are allowed a discount of from 40 to 42 per cent.

Price list of French tin-plate factories, July 1, 1903.

Dimensions and number of sheets in case.	Net weight.	Second grade.		Superior grade.	
		Flawless.	Not flawless.	Flawless.	Not flawless.
	<i>Pounds.</i>	<i>Per case.</i>	<i>Per case.</i>	<i>Per case.</i>	<i>Per case.</i>
Case of 150 sheets (12.79 by 9.6 inches).....	77½	\$4.44	\$4.24	\$4.86	\$4.66
	92½	5.00	4.40	5.39	4.80
	94½	5.39	4.60	5.79	5.00
	107½	5.98	5.00	6.58	5.60
Double case of 150 sheets (19.21 by 12.79 inches)...	155	8.88	8.48	9.60	9.26
	164	10.00	8.80	11.78	9.66
	189	11.78	9.20	11.58	10.00
	215	11.96	10.00	13.16	11.20
Case of 225 sheets (13.85 by 10.11 inches).....	116	7.53	7.13	8.36	7.95
	143	8.69	7.72	9.25	8.55
	165	9.69	8.52	10.25	9.33
	187	10.75	9.30	11.40	10.10
	209	11.75	9.88	12.55	10.90
Double case of 112 sheets (27.71 by 20.23 inches)...	116	7.53	7.13	8.36	7.95
	143	8.69	7.72	9.25	8.55
	165	9.69	8.52	10.25	9.33
	187	10.75	9.30	11.40	10.10
	209	11.75	9.88	12.55	10.90
Case of 50 sheets (29.37 by 9.6 inches).....	77½	5.10	4.76	5.50	5.16
	99½	5.56	5.10	5.80	5.56
	107½	6.10	5.30	6.50	5.70
	122½	6.56	5.50	7.10	6.10
Case of 50 sheets (39.37 by 16 inches).....	151	10.46	9.56	11.20	10.40
	167	11.30	10.40	12.26	11.26
	194	12.40	11.06	12.35	10.10
	220	13.55	11.45	14.55	10.50

Price list (July 1, 1903) of tin plate for making cans for preserving vegetables, fish, etc., per case of 225 sheets.

Dimensions.	Approximate weight.	Price per case.	
		Flawless.	Not flawless.
<i>Inches.</i>	<i>Pounds.</i>		
16.14 by 13	156	\$10.98	\$10.38
16.53 by 10.03	127½	8.80	8.20
16.53 by 14.96	182½	13.06	12.40
13.58 by 13.58	136	9.55	8.95
18.11 by 10.23	136	9.55	8.95
16.53 by 13.77	165	11.96	11.18
18.3 by 13.77	182½	13.15	12.37
18.11 by 13.38	178	12.56	11.65
15.35 by 14.96	169	12.18	11.25
18.5 by 10.23	141	9.75	9.15
17.12 by 9.29	127½	8.65	8.05
16.9 by 10.15	132	9.05	8.45
17.12 by 10.15	138	9.45	8.45
18.7 by 9.44	136	9.45	8.85
17.99 by 9.37	130	9.05	8.45
17.48 by 8.14	118½	8.23	7.64
19.68 by 11.8	173½	12.18	11.38
25 by 9.01	189	12.78	11.80
17.51 by 10.66	149	10	9.40
17.99 by 9.37	114½	8.65	8.05
18.11 by 13.38	163	11.96	11.18
20.57 by 13.77	187	13.70	12.97

BENJ. H. RIDGELY, *Consul.*

NANTES, FRANCE, *October 1, 1903.*

AMERICAN APPLES IN GERMANY.

(From United States Consul-General Mason, Berlin, Germany.)

Under the familiar headline "Another American danger," the agrarian and conservative press in Germany is commenting somewhat demurely on the unprecedented influx of American apples this season and the extent to which they have filled and dominated all the more important markets in this country. There is not a fruit store or hardly a market fruit stall or retail grocery shop in Berlin or its suburbs that does not display as a prime attraction one or more barrels of Baldwins, Pippins, or other standard varieties, surmounted by a placard bearing the legend "Echte Amerikaner." Not only this, but wagons piled with the same attractive merchandise patrol the outlying streets and peddle the American fruit at the uncommonly low price of 20 pfennings (5 cents) per pound. This, at a time when ordinary cooking apples grown in Germany and Austria retail for from 6 to 7 cents per pound, has furnished an object lesson of comparative cost, quality, and flavor as between the American and European fruit

which can not be misunderstood or ignored. The dimensions to which this special import has grown will be indicated by the fact that only a few days ago the steamship *Main*, of the North German Lloyd Line, landed at Bremen 22,929 barrels and 1,540 boxes of American apples, which is said to be the largest fruit cargo ever carried across the Atlantic in a single vessel.

From all accounts and the appearance of the American apples displayed here in markets and stores, they have generally arrived in excellent condition, showing not only that they are from a sound crop of good quality, but that American fruit growers and dealers have greatly improved their methods of picking and packing for export. The point is proven that, given a good sound apple crop in the United States, the standard varieties can be exported with entire safety in ordinary ventilated barrels without any of the elaborate and more or less costly paper wrappings that are used in putting up apples of choice quality from France, Italy, and the Tyrol. This, in view of the high cost of hand labor in America, is a point of great economic advantage, but it does not in the least modify the absolute necessity of careful hand picking, assorting, and putting while dry into barrels with such care that all bruising and contusions are avoided. Much is also doubtless due to shipping in properly cool and ventilated steamers, instead of the hot, stuffy holds of slow sailing ships, piled with other freight and with hatches battened down from port to port.

POSITION OF THE PRESS.

The general tenor of agrarian-press comment on the present Yankee-apple invasion is that it proves the inadequacy both of the German home-grown-fruit supply and of the existing import-duty rate to protect the farmers of the Fatherland from this fatal competition. To this is usually added the fervent hope that these colossal importations will not result in filling the orchards of Germany with the San José scale.

The fear is gravely expressed that not even the German inspectors can scrutinize such cargoes of apples as are now coming with sufficient minuteness to prevent an occasional "Schildlaus" from escaping, and this, notwithstanding the assurance of German scientists that the San José scale can never thrive and reproduce in the climate of Germany, continues to inspire apprehension in certain quarters.

GERMAN FRUIT ORCHARDS.

The facts are simply that, with the exception of a few favored localities, Germany is, for climatic reasons, not well adapted to the growth of high-grade apples; that horticulturists here have been

strangely negligent and have permitted their orchards in many cases to degenerate into groups of old trees bearing poor, natural fruit, tough in fiber and of indifferent flavor; that the superior, crisp tenderness and aromatic taste of the American apples, combined with cheapness of price, are now so well known and highly appreciated that their home market can never be reconquered, if at all, until new orchards of carefully selected and grafted varieties can be grown and brought into bearing. Even then there will be seasons so humid and deficient in sunshine as to make the competition difficult for the German farmer.

Official statistics show that in 1900 Germany imported 124,874 tons of fresh apples; in 1901, 118,233 tons; and in 1902, 112,635 tons—of which the United States supplied 1,760 tons, 1,972 tons, and 5,835 tons, respectively. This year the American contribution will far surpass that of any previous season, but it will be after all only a small fraction—probably not more than 8 or 10 per cent—of the aggregate apple imports of Germany. There is, therefore, and will always be, abundant room for expansion in this branch of American exports to Germany. Not for a generation to come, if ever, can the native-grown supply be expanded and improved to meet the steadily growing demand. The advantages of superior quality and generally lower price, the heritages of a fertile soil and genial climate, will be permanently in favor of the American fruit. If the trade is vigorously pushed and judiciously managed, the tendency of our fresh-fruit exports will be to replace more and more the vast quantities of apples that are now imported from Switzerland, Austria, Holland, and Italy.

FRANK H. MASON,
Consul-General.

BERLIN, GERMANY, *December 19, 1903.*

AMERICAN METHODS AND MACHINERY IN GERMANY.*

(From United States Consul Harris, Mannheim, Germany.)

A query frequently raised by the German press is how American manufacturers paying wages at least twice as high as are paid in Germany are able, in many cases, to produce their wares cheaper than they can be produced here.

The solution of this question is certainly before the German manufacturer as never before. He sees that the cheaper raw material and boundless natural resources of the United States furnish only a partial answer, and that the real solution is to be found in a

* Extract from annual report of Consul Harris, which will be printed in full in *Commercial Relations for 1903.*

manufacturing system that rejects traditional methods—a system the keynote of which is to lessen the cost of production; that consigns a machine to the scrap pile as soon as a better one is to be had, and in turn consigns that one to the scrap pile when occasion demands—a system that offers a constant incentive to each man connected with the manufacturing plant to bring out the best that is in him.

The advantages of such a system have been again and again referred to by the German press during the past year. It will undoubtedly be the standard toward which, in the future, the German manufacturer in all lines will strive. He has already accomplished much in this direction. How rapidly and to what extent he may further advance remains to be seen. He will have the advantages of a widely diffused technical training among the German people, the product of a flexible school system which readily adapts itself to the needs of manufacturing and commerce; workmen who specialize easily and who are patient in the mastery of details. In some cases he will perhaps be hampered by the tendency of an academically trained class in a shop to discourage the advancement of those not so trained.

Whatever change of scope or method may occur in the future of German manufacturing, without question the United States will be the model whose methods will be chiefly studied and whose machinery will continue most in demand. Our manufacturers should be able to show that their machinery offered for sale here embodies the latest improvements. If the fact can be demonstrated by actual experience that certain classes of machinery cheapen the cost of production 15, 25, or 50 per cent over other machinery now in use, that fact will more than ever before commend such machinery in this market. The exact conditions as to skill of workmen, hours of labor, etc., under which such reductions of cost are made should be clearly stated, but not overstated.

No intelligent observer in this part of Germany can fail to have noticed the recent changes in methods and appliances that have been going on in every department of business as well as in other fields.

Farm machinery is rapidly taking the place of hand implements. In a small area of southwestern Germany the number of American farm implements sold each year runs well up into the thousands, showing how the scythe and the sickle are giving way to the mower and the harvester. Modern creamery appliances have gone into every cattle-raising locality. Wood-working and iron-working machinery are forcing hand work to the rear. Hotel elevators—scarcely to be found at all a few years ago—are now used in all the better

German hotels. It is but a few years since large apartment houses, with handsome stone fronts, had neither steam heat nor modern sanitary plumbing. Now all such houses are supplied with both. The German porcelain heating stove bids fair to disappear before the heater and the base-burner.

The suburban dwelling house standing apart with large yard and garden is a modern innovation in many parts of Germany. A half dozen years ago Mannheim had scarcely a single one: To-day it has dozens of them, costing from \$10,000 to \$25,000 each.

Cash registers are all but universal in stores in this consular district. Modern office furniture and office appliances are superseding the older styles. Even official correspondence is beginning to yield to the omnipresent typewriter.

In foot wear, in American fashion plates in tailor shops and American patterns in dry-goods stores, in the use of oatmeal and other breakfast foods, in the popularity of grill rooms and grill-room cooking, in the use of rocking-chairs (now offered for sale in every first-class furniture store), in an entire revolution of dentistry and dental appliances, in the increasing popularity of life insurance among well-to-do business men, and in countless other things are to be seen the changes that are taking place.

These changes suggest that Germany will continue to be an appreciative market for labor-saving machinery and for office, store, and household furniture of such types as are likely to find favor in the United States. They suggest also that the German manufacturer will have a home market similar to our own to stimulate him to greater excellence and make him a still more formidable rival in the open markets of the world.

H. W. HARRIS, *Consul.*

MANNHEIM, GERMANY, *November 25, 1903.*

AMERICAN TRADE IN BADEN AND ALSACE-LORRAINE.

(*From United States Consul Brittain, Kehl, Germany.*)

CONSULAR DISTRICT OF KEHL.

The leading cities in this district are Strassburg, Pforzheim, Markirch, Zabern, Saarsburg, Saargemund, Metz, Offenburg, Buhl, Baden-Baden (the great health resort), Barr, Rastatt, and Kehl. Manufacturing is carried on in nearly all the large cities and towns in the district and also in a number of small towns in consequence of the water power afforded by the streams in the mountains.

CITY OF STRASSBURG.

Strassburg has a population of about 170,000, which is increasing rapidly. Especially is this true of the section of the city in the vicinity of the university buildings, which are exceedingly fine. The new post-office for Alsace-Lorraine is a very pretty building, as are also the other Government structures. Rents have been quite high, partly on account of the large number of soldiers stationed in the city, but within the past year a large number of new and artistic flats have been erected. During the summer season the hotels are usually crowded, on account of the thousands of tourists who visit the city. A complete sewerage system is now being constructed at a cost of about \$1,666,000. As a railway center Strassburg has few superiors in Germany, being on the direct line from Switzerland to Belgium and from Paris to Vienna and the East, as well as numerous shorter lines diverging in all directions.

Railway travel is less expensive in the Grand Duchy of Baden, however, in consequence of the Kilometerhefte, or mileage books, in use. By the use of these books one may travel first class for $2\frac{1}{2}$ cents, second class for $1\frac{1}{2}$ cents, and third class for less than 1 cent per mile.

AMERICAN COLLEGE IN STRASSBURG.

In addition to the University of Strassburg, which is one of the best in Europe, the city has numerous schools and a college for the education of American boys, where they are prepared to enter universities in the United States. The leading object of this college is to give the American boy a practical knowledge of German and French where the languages are spoken.

EXPORTS TO THE UNITED STATES.

The leading exports from the Kehl consular district are as follows: Steel rails, steel billets and bars, hides, leather, glassware, ironstone china, watch crystals and spectacle glasses, jewelry, textiles, and goose-liver pastry, the latter going from Strassburg and being very renowned.

The total exports to the United States during the year ended June 30, 1903, amounted to \$2,618,183.18, being an increase of \$582,265.12 over the exports for the year ended June 30, 1902, which amounted to \$2,105,918.06. The shipments for the first six months of the calendar year of 1903 are not so large as those covering the same period in 1902. The decrease is largely in steel, hides, and jewelry.

IMPORTS FROM THE UNITED STATES.

It is almost impossible to obtain any correct estimate of the amount of merchandise imported from the United States into this district, owing to the fact that a large percentage of the merchandise comes by way of other ports and is entered before reaching the ports of the consular district. The River Rhine is only navigable as far up as Strassburg during a few months in each year, and then only for shallow-draft vessels, which receive their cargoes from the ocean-going vessels at either Antwerp or Rotterdam. Large quantities of lumber and grain arrive by water when the Rhine has sufficient volume.

The leading articles imported from the United States are evaporated fruits, such as prunes, apricots, apples, and pears; also lumber, grain, lard, cotton-seed oil, and petroleum, coming direct.

CALIFORNIA FRUIT.

The fruit growers of California can not give too much attention to the market prospects in this part of Germany, as there is an increasing demand for prunes, apricots, pears, and apples. This season will probably record the sale of at least 35 carloads in Alsace-Lorraine, and if the producers on the Pacific coast were to get into closer touch with the dealers over here the sales could be easily increased 100 per cent. This season several large sales have been sacrificed on account of the California dealer giving prices in dollars and cents and weights in pounds, instead of giving his quotations in German money and using the metric system. During the winter, spring, and summer months the producer and buyer should come to a thorough understanding as to quality of fruit and terms of sale, so when the season arrives purchases can be made by cable without the loss of time occasioned in explaining letters. All this takes weeks of time.

As an indication of the interest being taken in California fruits, I mention the fact that already three Strassburg dealers have informed me they intend visiting California during the coming spring and summer, for the purpose of becoming better acquainted with good houses and to make contracts for the next winter's purchases. The fruit is highly spoken of, both as regards quality and method of packing. I think it would be advisable if the largest sizes of prunes—say, 20's to 30's—were packed in boxes of 2 kilograms (4.4 pounds) each, in a neat and attractive manner. These goods would compete with the finer class of French fruit and would command a good price. All prices should be quoted c. i. f. Antwerp, Rotterdam, or Hamburg, the first named being the nearest port.

AMERICAN GRAIN.

American grain dealers who are looking for export trade should correspond with the Illkircher Muehlenwerke, A. G. Kronenburgstrasse 25, Strassburg, or with Albert Klein, 35 Kronenburgstrasse, or Leo Gussone (all of Strassburg). The first named is one of the largest milling companies in Germany, and the mills, which are located at Strassburg, are new and modern, with a capacity of 160 tons of grain per day. The two last named are commission merchants.

While visiting the mills some days ago, I was informed that the grain from the United States gives good satisfaction, and that it reaches the mills in a cleaner condition than does grain coming from other countries.

AMERICAN LUMBER.

One of the leading lumber firms in Strassburg wishes to purchase California redwood in sample lots, say, of two or three carloads. These dealers, H. Fuchs' Sons, Rheinhaufen, Strassburg, inform me that they expect a market in Germany for this sort of lumber, but that thus far it is but little known. Considerable quantities of oak and pitch pine are sold here, and many of the houses in the Black Forests of Germany are built of lumber coming from the United States. Regarding the hard woods, the complaint is made that American lumbermen cut the timber at all seasons of the year, while it should be cut only when the sap is down.

AMERICAN SHOES.

Several stores in Strassburg carry small lines of American shoes, but the goods in stock are generally too expensive to become popular. If a line of shoes were placed on sale at \$3.75 to \$4 per pair, with an assortment to select from, there is a good opening, for the quality and style of the American shoes is admired generally. Thus far the American shoe manufacturer has neglected the market prospects in this part of Germany. The leading shoe dealers are: D. M. Bodenheimer, Kleberplats 29; E. & C. Borzer, Munstergasse 31; Isidor Cahn, Alter Weinmark 27; Rovatti et Cie., Meissengasse 11; Gustav Feindel, Brogliplatz 9; Tack Conrad & Co., Kinderspielgasse 1; W. Diefenbronner & Co.—all of Strassburg.

JOSEPH I. BRITTAIN, *Consul*.

KEHL, GERMANY, *December 12, 1903.*

AMERICAN TRADE WITH SOUTHERN GERMANY.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

The last annual report of the chamber of commerce of the city and district of Mannheim, the great inland port of entry from which foreign goods are distributed to southern Germany and Switzerland, contains some noteworthy remarks on trade with the United States. Among these I quote the following:

Iron and steel trade.—During 1902 domestic orders did not nearly suffice to employ Germany's iron and steel works. The exportations to the United States assumed large proportions, but brought little profit and in some cases even loss; nevertheless it helped to keep the works going and prevented large discharges of employees. The capability of the American market to take up our surplus of iron and steel appears to wane. The prospects for the future are made dismal by the threatening danger that our great customer, the United States, will in the near future enter the arena as a competitor.

American petroleum.—Since last spring the system of retailing petroleum by means of tank street wagons has been extended. We learn from impartial sources that this system is beneficial to the consumer and gives the retail dealer numerous advantages above the former mode of receiving the oil in barrels. The losses and abuses attending the latter are thus avoided, the oil is sold at a lower price, and the public is protected against the manipulations formerly practiced by some of the petroleum dealers of mixing other inferior oils with the American petroleum, leaving the consumers to believe they were getting the pure American product. True, the wholesale oil dealer to a certain degree is a loser by this tank system, but that can not be helped. Aside from this mode of selling the American oil, the importers of Russian and Roumanian petroleum have now introduced the tank street wagon system for the sale of their oils. The strong competition existing between these different oil-importing companies has lowered the price; therefore there is no ground for speaking of an oil monopoly.

Rubber goods.—A rubber-goods manufacturer in this district says the business in his line is adversely affected by the strong competition made by American and Russian rubber goods.

California dried fruits vindicated.—The chamber, having been informed of various cases of police prohibitions against the sale of California dried fruits on account of these containing sulphuric acid, instituted inquiries among the dealers in the district and conclusively ascertained the fact that not a single case of injury from the consumption of such fruit has ever been known. In consideration of the vast importance which the sale and use of these fruits are to the Mannheim district, the chamber petitioned the Imperial Sanitary Bureau of Germany to act in the matter by fixing the amount of sulphuric acid allowable in dried fruits.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *November 4, 1903.*

BRESLAU-UNITED STATES TRADE.

(From United States Consul Man, Breslau, Germany.)

EXPORTS TO THE UNITED STATES.

The exports declared from this consular district for the United States during the year ended June 30, 1903, amounted to \$1,347,472.

The principal articles of export—porcelain, paper, and linen—showed a considerable increase, while leather gloves, woolen goods, and glassware decreased.

In the declared exports for the quarter ended September 30, 1903, leather gloves increased as well as linen goods, while porcelain and paper fell off.

AMERICAN PRODUCTS IN BRESLAU.

American goods of various kinds seem to be slowly acquiring a market in this locality in spite of the fact that every possible obstacle continues to be placed in the way of their introduction and sale.

American shoes are beginning to be nearly as well known in Breslau as in Berlin, Dresden, Frankfort, Munich, and other important cities, where they are to be found in stores devoted exclusively to their sale, whereas in Breslau they are still only sold in shops handling other makes of shoes or in connection with men's furnishing goods. It is said, however, that Breslau is soon to have an American shoe store for the sale of American shoes only.

The American Tobacco Company seems to have gained so firm a footing in Germany that I hear the dealers have formed clubs or unions to hinder the sale of their products; one measure being an agreement to endeavor to persuade the retailers not to bring out these products to customers except at their express request or demand, and, further, not to display any of their advertisements in show windows or elsewhere.

While most of the lines of American goods that have made their way into other parts of northern Europe are also to be found, with limitations, in Breslau stores, there is evidently a field for much larger sale of all these wares, which are invariably kept in the background unless especially required, when a cheaper German imitation or similar article is generally recommended to the customer.

Among the articles which might be sold in this district at the present time are American door locks intended for front or entrance doors, as, in addition to the old-fashioned locks with their large and

cumbersome keys and lack of security withal, they are now introducing here an extra-security lock, said to be on the American system, with a small flat key, which unites safety with convenience and which in make and finish seems greatly inferior to American locks of the same style. These locks should be mortise locks, as rim locks are not in general use, and should be of moderate price.

American office furniture and rocking and easy chairs, many of the latter in the style of what is known as the Morris chair, are to be seen for sale here.

The sale of American agricultural machinery and implements, while considerable, could undoubtedly be greatly increased in this large and important agricultural district, where so many manufactures of an inferior order find an excellent market.

ERNEST A. MAN, *Consul*.

BRESLAU, GERMANY, *October 22, 1903.*

WURTTENBERG INDUSTRIES AND AMERICAN TRADE OPPORTUNITIES.*

(*From United States Consul Ozmun, Stuttgart, Germany.*)

MUSICAL INSTRUMENTS.

The chief exports from Wurttemberg to the United States are musical instruments, chiefly mouth harmonicas.

There are found on the upper Danube several large harmonica factories in small towns. The largest one has one main and fifteen branch factories and employs 1,500 people, much of the work being done at the homes of the employees. The annual output of this firm has been for several years about 5,000,000 harmonicas.

This firm now announces that it has begun the manufacture of accordeons. The business indications in this line do not point to an immediate improvement.

Although the stocks on hand have been largely disposed of on account of the improved conditions of foreign markets, manufacturers do not seem to look for any immediate improvement in this industry. Wages have increased rapidly, while prices have been materially cut. Increasing competition, especially with the manufactures of Saxony, has been the chief characteristic of the trade in 1902 and 1903.

The expected improvement in Germany did not materialize, nor did it in Austria, where the factories protected by high tariffs hold

* Extract from the annual report of Consul Ozmun, which will be printed in full in *Commercial Relations for 1903*.

the local market well in hand. In England and Russia business was not good, and failures caused large losses. Switzerland was still worse. In Australia and New Zealand business was quiet, the exports of the past summer thereto not being equal to that of last year. It is believed that the increase in the tariff in Australia has no influence upon this trade.

In South Africa business was good at the beginning of 1903, but suddenly became quiet, which is not attributed to the increased tariff, but to the great crisis now taking place there. Business is not as good there now as it was before the war. In India and China business was bad, but in Japan conditions were better.

The conditions in this industry have improved during 1903. The three large well-known manufacturers here report that business has increased very satisfactorily.

Though no pianos are exported from here to the United States, 50 per cent of the output is exported. There have been very few men out of work in this line and factories are running on full time. The outlook for 1904 is satisfactory. Keen competition with American firms is reported in Central and South America.

SURGICAL INSTRUMENTS.

The year 1903 has shown considerable improvement over the last three years. At the beginning of the current year there was a lively inquiry for goods and later on it increased still more, but profits, on account of competition, are always decreasing.

This industry is well represented in Wurttemberg, where one of the largest factories in Europe is located, producing over 20,000 different kinds of instruments for human and animal surgery.

DRY COLORS AND CHEMICALS.

In colors for printer's ink, largely exported to the United States, the improvement noticed at the beginning of the year was maintained; nevertheless competition is always increasing, and it is very difficult to get orders to keep the mills going. Prices have also ranged lower and longer time has been demanded and given.

In general the color business has been less satisfactory than in previous years. Although prices for raw materials have declined, selling prices on account of keen competition have decreased in still greater proportion.

In chemicals the business for the current year has been unsatisfactory; for, although coal declined in price, the prices of chemicals declined still more where overproduction and competition occasioned by cheaper coal caused prices to be greatly reduced. It is believed that it will be necessary to stop altogether the production of some

articles, on account of the immense stocks now on hand. There has already been reported some reduction of working forces in this line.

CORSETS.

The corset industry of Wurttemberg, which a decade ago enjoyed a large market in the United States, maintained, notwithstanding the very important loss of the American market, a successful career up to 1900, but has since then been less fortunate. Whalebone has increased from 38 to 80 marks (\$9.04 to \$19.04) per kilogram (2.2046 pounds), and the price of the article has not materially advanced. There has been some increase the past year, variously estimated at from 5 to 9 per cent, but the profits have been materially curtailed.

DRY GOODS.

The dry-goods trade reports some improvement, especially in the finer qualities. The large houses here carry fine displays of costly Paris-made dresses. These dresses are often copied and the general Parisian styles are closely followed. Within the last few years I have succeeded in creating a demand for American styles by distributing copies of illustrated American periodicals devoted to this trade, and several houses have subscribed to such journals. The manager of one large house here declared that the American styles were, not only in his opinion but in the opinion of many experts, superior to any other, and he predicted that there was a great future for these styles if the business were properly attended to.

CHICORY.

The situation has changed but little in this industry in the past nine months. The only firm which exported chicory from Wurttemberg to the United States established a house on Long Island a few years ago, and there have been no exports of this commodity to the United States from this consular district since then.

WURTTEMBERG VS. AMERICAN FURNITURE.

For many years furniture has been an important industry in Wurttemberg, and the large factories here have branch houses in several of the chief cities of the Empire where the finest grades of all kinds of furniture find good markets. There is no export from Wurttemberg to the United States, and, as I have often pointed out in former reports, there exists here a good field for the exploitation of American furniture, especially of the cheaper grades. These goods are manufactured for the most part by very small concerns in the villages and small towns, are entirely hand made, and are not to be compared with American-made furniture of that class, although considerably higher in price. The styles also are antiquated, the forms are clumsy, and

the material poor. With only a moderate amount of enterprise on the part of our manufacturers these markets could be completely captured in a few years and held, as there exists no machinery here to compete with ours, and this business is in the hands of men of too small capital to erect factories for competition. These small manufacturers in such an event would not of necessity go into bankruptcy and starve, but on the other hand they could make more money in handling American-made furniture than in selling their own laboriously made product.

Business in this line in Wurttemberg showed some improvement over 1902, but still it was weak and slow. There were not so many expensive villas, as detached houses are called here, erected. Buyers bought as little as possible and the competitive bid system now in vogue here reduced profits materially. Export business was very bad, many houses doing nothing at all, and business in Switzerland was difficult, owing to the new gross-weight tariff. Wages were about the same, and one firm reports that the ability of young laborers has decreased.

AMERICAN OFFICE FURNITURE.

This sadly neglected line has shown some little improvement of late by the renting of a good shop in the principal business street of Stuttgart by a well-known dealer in office supplies.

His goods are displayed to advantage and attract considerable attention. He reports his sales as good and increasing satisfactorily, but it can be noticed that he has fully as much, if not more, German imitations of the American patterns, which he perhaps prefers to sell. It is needless to say that only when our manufacturers take the trouble to make sole agents for their goods will results be obtained at all commensurate with the opportunities. Had our manufacturers pushed their export business with proper vigor there would never have been any German imitation of American office furniture.

AMERICAN MACHINERY AND TOOLS.

These lines have shown no increase in the past year. There appears to be little if any effort made to secure a market here, and only a few are bought now and then of importing houses in Hamburg. American novelties are in good demand, but the dealers in general do not seem to know where to get the goods.

BOOTS AND SHOES.

As has been often reported, there has never been a serious attempt on the part of American manufacturers to sell goods in the Wurttemberg market. There are a few shoes of American make here for sale, but they are used more for exploiting the German imitations

than for any other purpose. There is a good trade awaiting the manufacturer who has sufficient enterprise to enter this market.

The trade in German goods has not been as satisfactory as last year. There is considerable overproduction and a large stock on hand. The German shoes have improved much in appearance in the past year, owing to improved American machinery being used in the German factories and the importation of American shoe-factory superintendents, but the quality is still lacking.

The best factory now produces quite a respectable-looking shoe, which was not the case a few years ago.

AUTOMOBILES.

There has been a very satisfactory automobile output and sale. One large well-known factory in this district, which employs 1,000 hands here and about 120 officials, has several branch factories. The branch factory in Marienfeld, a suburb of Berlin, employs about 800 men and officials; the one in Vienna, about 400 men and officials. Besides these, they established a branch in England and one in Milan and repair shops at Puteaux, near Paris.

Part of the factory of this establishment burned last June, on account of which considerable loss was sustained. The new works at Untertürkheim, for which they purchased about 25 acres of land, will be very extensive; a portion of this plant will be in working order before the end of the year. This firm is always many months behind in its orders, and often the fortunate possessor of a new machine is able to sell it at considerable advance, so great is the demand for this popular make. The outlook for the coming year is also very satisfactory. There has been some slight attempt at establishing a sales room for American automobiles, but, as usual, it has resulted in nothing, for the manufacturer believed that it could be accomplished without sending anyone here to carry out and complete the arrangements.

EDWARD H. OZMUN, *Consul*.

STUTTGART, GERMANY, *October 23, 1903.*

COMMERCE BETWEEN GREECE AND THE UNITED STATES.*

(*From United States Consul McGinley, Athens, Greece.*)

The trade between Greece and the United States is slowly, though surely, increasing. As I have repeatedly stated in my annual, and in some of my special, reports, the United States is never credited with one-half of her products that reach Greece, they being

* Extract from annual report of Consul McGinley, which will be printed in full in *Commercial Relations for 1903.*

brought to Europe by the leading countries and reshipped to Greece as English, German, French, or Italian products. Up to March, 1902, when a direct line of steamships began to sail between New York and the Levant, all the goods and machinery ordered from the United States by Greek importers had to be brought through other countries of Europe, causing long and vexatious delays and a consequent handicap to our trade. Now that these ships touch at Grecian ports once a month, let us hope that our merchants and exporters are taking advantage of the line. I know from the invoices certified to at this consulate and the consular agency at Piræus that at least nineteen-twentieths of the Greek exports to the United States from the port of Piræus are now shipped by the direct line.

The exports to the United States, and their values, invoiced in Athens and Piræus during the year ended June 30, 1903, were:

Article.	Value.	Article.	Value.
Sponges.....	\$40,803.00	Goatskins.....	\$1,238.00
Marble.....	33,978.26	Octopus.....	962.48
Magnesite.....	32,538.92	Antiquities.....	927.58
Cheese.....	30,302.94	Plaster casts.....	834.44
Olive oil.....	19,523.54	Caviare, red.....	753.49
Olives.....	18,000.87	Butter.....	631.87
Cognac	9,377.17	Liquors	604.00
Tobacco.....	8,459.98	Household effects.....	750.00
Emery stone.....	5,403.00	Other articles.....	2,668.43
Wine.....	5,071.28	Total.....	218,067.74
Oriental rugs.....	2,641.25	Total preceding year.....	222,344.31
Lookooms.....	1,086.24		
Citrons.....	1,511.00	Decrease.....	4,276.57

In addition to the foregoing, large shipments have been made to the United States from Syra, Volo, Naxos, and perhaps other ports in this consular district during the year, the invoices of which were authenticated by foreign consuls (the United States having no consular representatives thereat) and accepted by the United States customs officials, and this consulate has no record of their values, which would undoubtedly swell the total value of exports to the United States from this district to a much higher figure than that given.

As previously reported, one of the principal handicaps to trade between Greece and the United States is the custom of American exporters in insisting on cash payments on delivery, while their foreign competitors give credits, often for a term of six months. European exporters who give long credits in Greece usually have agents on the ground to look after their interests. American exporters have no agents here in most cases; in others they rely on

native or resident agents. In either case they are in danger of losing the price of their shipments, a fact that often happens, and then they will ask the aid of their consul to collect the money or punish the swindlers. Americans claim that their business in Greece is not large enough to pay the expenses of sending a representative to attend to it; but if they would follow the example of many of their European competitors, by clubbing together to send and maintain a reliable agent on the ground, they would have occasion to rejoice over instead of lamenting their experiences in the Grecian markets. Without reliable agents on the ground time payments can not be given without running great risks, and without giving credits it will be impossible for American exporters to build up a large trade here in the face of the competition in this market. The Greeks prefer American to other goods or products, and will purchase them, prices and terms being equal to those on which European products are sold.

Complaints of the carelessness of American exporters in packing and shipping goods continue to reach this consulate. Pack securely and ship by the most direct line if you would please Greek importers. Nothing is more annoying than to wait many weeks overtime for goods ordered and find on their arrival that they have been greatly damaged or destroyed by insecure packing. Send only the best products; many American exporters ruin their foreign trade by shipping inferior products.

There have been no important changes in freight rates between Greece and the United States during the past year. Freight rates on coal from Great Britain continue to be from \$1.23 to \$1.85 and from the United States \$3.85 to \$4.25 per ton. There is no good reason for such a difference in the freight rates except that the exporters of the United States lack their own steamers and have to ship freight by steamers owned by foreign countries.

There have been no changes in harbor dues or rules at Piræus during the year. There are no Grecian laws that discriminate against American vessels, but, as shown by the tables in this and former reports which give the movement of foreign shipping in Greek ports, the flag of the United States has not appeared on a single merchant vessel in Grecian waters during the last five years.

DANIEL E. MCGINLEY, *Consul.*

ATHENS, GREECE, *October 20, 1903.*

AMERICAN TRADE WITH MALAGA.

(From United States Consul Birch, Malaga, Spain.)

The lack of direct steamship facilities from the United States ports to this section of Spain operates against the importation into Andalusia of American wares, and it is generally recognized that until such service is established there can be but a spasmodic and ineffectual attempt made to compete with the products of German, French, and English manufacturers. Few new American articles have been introduced within the past year, but included in these was the "cash register," which is now in many of the local stores.

On the other hand, the export trade of Malaga will be greatly aided by the establishment of direct steam communication with the United States. Two regular steamships of the Austro-Hungarian Line call here, en route from Trieste, on fixed dates of each month and proceed to Boston, New York, and Philadelphia, without touching at any intervening port in Europe.* This enables buyers in Boston and Philadelphia to secure their wares without paying extra freight charges from New York.

The innovation has, as was anticipated, resulted in creating keen competition for cargo, with the inevitable reduction in freight rates.

The customary rate of 40s. (\$9.65) and 10 per cent per ton to New York has, in many instances during the attendance of competing steamers in the harbor, been reduced to as low as 25s. (\$6) per ton.

D. R. BIRCH, *Consul*.

MALAGA, SPAIN, *October 21, 1903.*

AMERICAN PRODUCTS IN MALTA.†

(From United States Consul Grout, Malta.)

In attempting to give an official list of the products imported into Malta from the United States, I am met at the outset with the fact that the customs authorities only take note of dutiable goods. Nondutiable imports must therefore be left to mere surmise. The value of the dutiable imports is not given, and in making up the following list of goods imported from the United States during

*The itinerary of those steamships (Trieste-Malaga-United States; United States-Trieste-Malaga), while being calculated to enlarge the exports from Malaga and all Spain to the United States, renders no aid whatever in the enlargement of exports from the United States to Malaga.

†Extract from annual report of Consul Grout, which will be printed in full in *Commercial Relations* for 1903.

the fiscal year ended March 31, 1903, I can only give the quantities and the duty collected thereon:

Article.	Quantity.	Duty collected.
Beer.....gallons...	6	.....
Preserved meat.....pounds...	2,100	\$29.19
Wheat.....do.....	17,760	92.46
Indian corn.....do.....	11,520	34.06
Flour.....do.....	8,508,150	70,982.76
Cotton-seed oil.....do.....	1,363,514	8,190.31
Spirits.....gallons...	940	1,143.62
Petroleum.....do.....	120	4.86
Tobacco:		
Cigars.....pounds...	672	165.46
Cavendish.....do.....	22,280	4,073.26
Leaf.....do.....	48,617	1,970.93
Total.....		86,666.91

IMPORTS FROM THE UNITED STATES IN 1903.

Wheat and flour.—The decrease in demand for American wheat for the past year or two has been more than made up by the increasing demand for our flour. Most of the wheat used here to-day comes from Russia. It is of the quality most needed; time taken in voyage is short and freight rates are very low. All taken together give Russian wheat a position that at present is unassailable. In the matter of imports of flour I am able at this time, from statistics which I have been keeping in this office, to present the following table, which shows for the first six months (1903) the quantities of flour imported:

*Flour imports at Malta for first six months of 1903.**

Whence imported.	Quantity.	Whence imported.	Quantity.
	<i>Bags.</i>		<i>Bags.</i>
New York.....	43,366	Trieste.....	50
Liverpool†.....	40,326	London.....	28
Marseilles.....	1,929		
Newcastle.....	1,000	Total.....	86,699

* The total value of the exports from the United States to Malta, Gozo, and Cypress Islands during the seven years from 1896 to 1902, inclusive, were as follows: In 1896, \$34,683; 1897, \$29,520; 1898, \$64,352; 1899, \$144,080; 1900, \$175,734; 1901, \$438,982; 1902, \$321,252.

† How much of the imports from Liverpool was American flour I have no way of finding out.

As the table shows, this year thus far American flour leads, and for the first time. In this connection I would again call attention to the necessity of paying attention to instructions sent as to making shipments. More trouble has been experienced by the Maltese buyer this year in the matter of his American flour imports than in any other article. He can easily get his flour from England wholly, if the fault is not remedied.

Lard.—Another article for which there has been a large demand is lard. My statistics show that during the six months under consideration there were received here 8,379 buckets and 150 barrels. This amount was received from various places, but at least four-fifths came from the United States, either by the direct line or by ports of transshipment.

Tobacco.—The stock of American tobacco, which was, at the time of making my last annual report, being kept in bond, has been slowly disposed of and small orders are now being sent to replenish. The duty of 18 cents per pound recently imposed rather restricts what otherwise would be a good business. No fault is found here relative to our methods of packing goods.

OPPORTUNITIES FOR TRADE.

Builders' hardware.—At the present time there is considerable activity in the matter of building apartment houses. Of these there is a scarcity and rents are high. I believe that, on this account, there is a good chance for some of our enterprising manufacturers to introduce house hardware and ready-made doors and sashes. The hardware at present to be seen here lacks finish, while the carpentry work to be seen in most of the new houses is very primitive.

Doors, sash, etc.—Wood stock, for doors and sashes, comes mostly from Austria-Hungary and is full of knots. A merchant here is at the present time endeavoring to obtain samples of the above goods from the United States. He tells me that if the samples are what I represent he will be able to do considerable business, as prices which have been given him are such as to enable him to compete and make a profit, besides supplying better goods.

TRANSPORTATION.

The question of transportation of goods from the United States to Malta, which for so many years was found to be difficult, is to-day one of easy solution, inasmuch as we now have two direct lines from New York, viz, the Mediterranean and New York Steamship Company and the Deutsch Levant Company.

SUGGESTIONS TO EXPORTERS.

Our exporters can not be too careful in the matter of making shipments from the interior of the United States to the water front. There has been much neglect in this matter of late, and unless it is remedied at once I fear we shall lose some of the trade which we have gained. Shipments should be made promptly where the railway is called into service, and strict attention should be paid in instructions received as to water route to Malta. Neglect of these things often means loss of profit to the Maltese buyer.

There seems to be a popular demand for certain lines of our goods. Especially is this so as regards flour. In this article we are slowly creeping up, but flour is a necessity in Malta and the one or two mills located here do not seem to cut into outside flour to any appreciable extent.

While trade in American goods has increased steadily, it did not, for the period given above, increase sufficiently to enable us to retain the position on the list of importing countries which we held last year.

For trade in general it may be said that while statistics given for the year are seemingly much larger than in previous years, it must be taken into account that the fleet and garrison have been largely augmented, and if business had not been dull the figures for this year would have been very much larger in proportion to population.

Malta has been overrun by commercial travelers from England, France, Italy, Austria, and Germany during the past year. They make periodical visits and the result is that we find a supply of their goods everywhere. There is a large business done in the various hardware lines and our goods need only to be inspected to find favor, but I am afraid it will be a long time before they are generally sold here unless the American drummer puts in an appearance first. Almost everyone speaks English here and therefore the matter of language would not prove an obstacle. Catalogues without number have been sent me, and I have placed them where I thought they would do the most good, but it must be remembered that they do not talk. The personal representative of an American house can do more good for his firm at Malta in one day than a catalogue can in ten years.

JOHN H. GROUT, *Consul*.

MALTA, *October 14, 1903.*

AMERICAN AGRICULTURAL IMPLEMENTS IN RUSSIA.

(From United States Consul Heenan, Odessa, Russia.)

The year 1903 has been a very satisfactory one for the sale of agricultural machines and implements. The American articles in this line continue to hold the field, and their number is increasing. Harvesters, binders, reapers, mowers, rakes, cornshellers, etc., have always been in favor in this country and their sale has been large. The American plow has now secured a permanent foothold in Russia, and its future promises to be a very satisfactory one.

In the DAILY CONSULAR REPORTS published by the Department of Commerce and Labor on September 23, 1903, there appears an

article taken from Das Handels-Museum of August 6, 1903, relating to agricultural machines in Russia; this article being a report from the German consul-general at Odessa to his Government. It stated that a sharp contest in the sale of agricultural machinery had just broken out in Russia, and that Germany could not hold her own in the sales of steam thrashers with locomotive attachments with Great Britain, owing to the cheap sea freights from England. It was further stated that the United States was once supreme in this field.

This is entirely erroneous, as the United States never had the field in thrashing outfits. It is quite safe to say that in the last forty years less than thirty steam thrashers of American make have entered this country. During the past five years I do not know of one of our steam-thrashing outfits having been sold in all Russia. Many years ago an effort was made to place these machines on this market, but the effort was a complete failure. The American thrasher did not meet the requirements of the trade in this country and consequently could not be sold. In the first place the American outfit looked too light in appearance to suit a taste long familiar with the heavy and cumbrous-looking English machine. It was quite useless to tell the Russian farmer that it was not necessary that a machine should look heavy in order to be strong. Another reason for the nonsuccess of the American machine was the circumstance that the outfits which were brought to Russia and offered for sale were so constructed as to have but one spout through which the grain was sent when thrashed. The English machine had three spouts and each delivered a different grade of grain, and delivered cleaned. This feature of the English-made thrasher is only found in such machines as are sent to Russia.

The Germans also send steam-thrashing outfits to this country, but as these outfits are simply reproductions of well-known English machines the people prefer to purchase the latter article. Nevertheless, the German-made thrashing outfit is largely sold in this country and gives satisfaction. The advent of the Germans in this line has resulted in marked improvements both in the engine and steam thrasher. A circumstance worthy of note is the fact that the engine and thrasher which may be suitable for home requirements is not suitable for export. This is recognized both by the British and the Germans; and while the three-spout machine is not in use in Great Britain, it is always found in the thrasher exported from Great Britain to Russia. It is the same with the German outfit. For years the English insisted on forcing on the market their favorite low-pressure engines, for the reason that in a country like England where coal was cheap such engines worked satisfactorily and cheaply. It

was the same with the Germans for awhile, but of late the Germans have been building high-pressure engines up to 6 atmospheres. This forced the English to follow or else lose their Russian trade, and they now make an engine for Russian use which is up to 5 atmospheres. Fuel is expensive in Russia; hence these changes. I know of one German house here which sold 80 steam-thrashing outfits last year, and I am given to understand that other German-made machines were sold in large numbers. I am also reliably informed that there were more German thrashers and engines sold last year, and thus far in 1903 also, than were sold by the numerous houses here representing the English article. I dwell on this question of steam-thrashing outfits because I am firmly convinced that the American outfit would meet with success if it were properly handled in this country. The homemade article is so well and so favorably known throughout the United States and has so well answered all local requirements as to make it seem ungracious to suggest a few changes in both engine and thrasher in order to meet the requirements and taste of the foreign buyer. After all it is not a question of pride or sentiment but of business, and that business can be made a great one in Russia, once the buyer is satisfied. The following well-known manufacturers of steam-thrashing machinery are represented at Odessa:

German.—Gesellschaft vrom. Th. Floether; Heinrich Lanz, Badenia; Garret & Smith; Gesellschaft Lehnigk.

British.—Ransom, Sims & Jefferies; Marshall & Sons; Ruston, Proctor & Co.; Foster & Co.; Robey & Co.; Clayton & Shuttleworth; Richard Garet & Son.

Hungarian.—Koenigliche Ungarische Staats Fabrik in Budapest.

These names practically represent the manufacturers of steam-thrashing machinery in Europe.

There is no representative of American steam-thrashing-machine manufacturers in Odessa.

The sale of garden tools of American make shows an annually increasing market in this country. Tools of various kinds, representing the finer qualities of the American articles, are also found on this market and are meeting with high favor. Knives for harvesters, mowers, reapers, etc., had a very large sale during the present year (1903) as well as in 1902.

The American automobile made its début at Odessa for the first time during the present year and a few machines were sold which have given great satisfaction.

THOMAS E. HEENAN, *Consul*.

ODESSA, RUSSIA, *November 30, 1903.*

OPENING FOR AGRICULTURAL MACHINERY IN RUSSIA.

(From United States Consul Slocum, Warsaw, Russia.)

There is a good chance for the American manufacturer to introduce his farming implements and machines into Russian Poland, more especially those machines designed for planting, cultivating, and digging potatoes.

Potatoes are planted in Russia and Russian Poland during the month of April and sometimes as late as May 10.

Two methods are employed: (1) In squares from 20 to 24 inches, the average being 22 inches, which are cultivated in both directions, and (2) in rows of 20 to 24 inches wide and from 12 to 22 inches apart, cultivated in one direction.

Labor being much more difficult to obtain in September and October, the more particular needs of the farmer are machines for digging purposes, as the season for such work is from September 15 to October 15.

The rows are always ridged up and the potatoes are planted about 4 inches deep.

The machines in general use in this locality are of native make, in some of which there could be no competition from the American manufacturer, owing to the low cost of those made here.

One of the machines in use here is an implement for making three furrows, in which potatoes are placed by hand, in distances varying from 12 to 22 inches. The distance between the furrows is adjustable from 20 to 24 inches and the depth of same from 3 to 8 inches. This implement is of native manufacture, weighs about 160 pounds, and is drawn by two horses. It sells at retail here for 22 rubles (\$11.33).

After the potatoes have been laid in the furrows they are covered and hilled by another implement of native manufacture, drawn by one horse, which retails for from 7 to 10 rubles (\$3.61 to \$5.15). One-horse hoes are used for cultivating the potatoes.

For some time there have been efforts made by German manufacturers to introduce machinery for planting, cultivating, and digging potatoes, among which was a machine for digging holes. This machine consists of four rows of stars, each having six spades, the distance between the stars and the distance between the spades being adjustable to suit the different requirements of the farmers. In the holes made by these machines potatoes are put by hand, ten

people being necessary to do this work. The depth of the hole made is also adjustable to the kind of soil.

The hole-digging machine is followed by a four-row-disk covering machine, which covers the potatoes and ridges them up. This same machine is also found useful as a weed destroyer. It has another advantage in that it well covers potatoes planted on fresh stable manure, without dragging the manure from the ground.

Both machines weigh nearly the same, about 840 pounds, and sell in Germany for the same figure—300 marks (about \$71.40).

The diggers used in this country are nearly exclusively of German make and of the "Muenster" pattern (more or less modified).

These potato diggers are far from being perfect, but they are the best known. The plowlike diggers, even of American make, have been frequently tried here, but without success. One of the enterprising Warsaw dealers in machinery tried to introduce American potato diggers into this market, but his efforts were discouraged because the American manufacturer with whom he dealt failed to make the required alterations in his machines or to adapt them to the local method of raising potatoes.

The American manufacturer can not afford to neglect a field which promises so rich a reward for his effort, particularly when one considers that potatoes form almost the sole food of the working classes in Russia and supply also a large part of the income of the farmers who grow them for sale to the distilleries. The present year has been an exceptionally poor one; but the totals from the ten districts of Poland for the years 1899, 1900, 1901—*i. e.* 6,142,805, 8,391,069, 7,836,269 tons—show conclusively the extent of the industry and furnish a rough estimate of the acreage under cultivation.

CLARENCE RICE SLOCUM,

WARSAW, RUSSIA, *November 6, 1903.*

Consul.

AMERICAN WATER-FILTRATION PLANTS IN RUSSIA.

(From United States Consul Heenan, Odessa, Russia.)

The American system of water filtration has been adopted in many of the cities of Russia. Owing to the turbidity of the large rivers in Russia, they are very objectionable as sources of supply for municipalities or for such manufacturing purposes as paper making, bleaching, dyeing, the making of chemicals, etc., unless the sedimentary matter carried in suspension is first removed. In 1898 the chief engineer of the Moscow waterworks was sent to the United States to investigate and report on the American system of

rapid filtration. On his return to Russia experiments were undertaken which demonstrated that by the American system extremely turbid waters could be rendered bright and clear at a rate of filtration fifty times as fast, and with only about one-thirtieth of the space required under the old sand system, while from a sanitary standpoint the bacteria were reduced over 99 per cent. The lessons taught by these experiments at Moscow resulted in the installation of the American system at Moscow, Nizhni Novgorod, Tzaritzin, Ribinsk, Balashoff, Amarvir, Vladimir, Simbirsk, and Tomolsk. In addition to these, American filters have been used for manufacturing purposes on a large scale at Kostroma, Yaroslav, Orekhov-Zoujere, Tver, and Moscow, and others of this description are now in use by the Russian Government at its navy department in St. Petersburg. Formerly, all of the parts of these filters were made in the United States—the cypress-wood tanks in Boston and the machinery, valves, and brasswork in New York. Since the late advance in the duties on American ironwork, several of the heavier parts of the machinery are now being made in Russia by the Jewell Export Filter Company.

THOMAS E. HEENAN, *Consul*.

ODESSA, RUSSIA, *November 30, 1903.*

WHY AMERICAN TRADE IN SPAIN IS NOT LARGER.*

(From United States Consul-General Lay, Barcelona, Spain.)

There are several causes that have hitherto militated against any very rapid increase in the sale of American manufactures in this country, but that our goods are steadily pushing their way into this market is an undoubted fact.

The chief obstacle that would-be buyers here have met with is that the strong home demand has offered little inducement to our manufacturers to go out of their way to overcome the initial difficulties inseparable from all attempts to secure new markets where conditions are so different to those to which they are accustomed. Another bar to the sale of many articles that might easily find an outlet here is the cash system of payments in vogue in the United States and to which Spanish merchants are not accustomed, nor, as I have explained on previous occasions, will they as a rule consent to pay for goods before seeing them.

There are several firms of commission merchants here who are endeavoring, with more or less success, to grapple with the situation

* Extract from annual report of Consul-General Lay, which will be printed in full in *Commercial Relations* for 1903.

and trying to find a way to push the sale of American products in Spain, but all complain to me of the difficulty of the question of payment. One enterprising merchant, who spent four months of last year visiting the principal manufacturing centers in the United States with a view to establishing a direct importing house for American goods in Spain, has given me his views, as follows:

Prior to 1897 there were few direct imports of machinery from the United States, most of the American machinery imported here being sold by English and German firms. These indirect sales still continue, owing to the fact that American makers have placed their exclusive agency for Europe in the hands of English and German commission houses. Naturally, this fact considerably enhances the price at which the goods are offered in the Spanish market, as frequently as much as 15 to 20 per cent has been added for middlemen's commissions. Many American manufacturers are bound by agreements with these European distributing houses and can not therefore sell direct to Spain; others are now placing their export trade in the hands of so-called eastern agents, who are exporting through wholesale dealers in New York.

It will thus be seen that the American manufacturer is placed at a decided disadvantage in competing with the European manufacturer, who sells direct through only one selling agent, who gets only a small commission on every sale made. If, instead of selling his goods through an eastern agent to a New York dealer, who in turn sells through his European general agent and he through his subagent, the American manufacturer would offer his goods direct to the trade, he would save the 15 to 20 per cent which is the extent to which his wares are now taxed by so many intermediate commissions, and would find himself easily able to compete with his European rivals; but unfortunately he refuses to grant any credit and prefers allowing a heavy discount for cash to offering facilities for a direct trade. Of course it must be remembered that the home trade has been so good during the past few years that exports were not wanted, and during 1902 it was with great difficulty that orders could be placed with any certainty as to the date of delivery. There are, however, many manufacturers who are now anxious to secure foreign business, as the home market is practically controlled by the various trusts, and these manufacturers, being ignorant of the conditions obtaining in foreign countries, especially in Spain, are compelled to place their products with New York export houses, with the result that their efforts are heavily handicapped, as already explained.

American agricultural machinery and implements are well accredited in Spain on account of their superior quality and good working conditions. About 35 per cent of the agricultural machinery sold in Spain is of American make, two-thirds of which are plows. Considerable quantities of American machinery are imported as of English or German make on account of the discriminating tariff, which is about 20 per cent higher for American than for European imports.

On the subject of packing I should mention that as a general rule American packing is very bad, the wood used being of inferior quality. Much care should be taken with the packing of goods for export, especially in the case of machinery, as damage and loss can be caused through faulty packing.

The following is a list of goods that might with advantage be exported to Spain:

Agricultural implements.	Electrical supplies.	Machinery—Continued.
Asbestos products.	Emery wheels.	Cotton.
Axes.	Engines:	Dyeing.
Babbitt metal.	Gas and gasoline.	Flour mills.
Bakers' supplies (machinery).	Hoisting.	Folding.
Hard rubber.	Pumping.	Gas-works.
Iron bedsteads.	Traction (locomotives).	Ice-making.
Beer.	Fire.	Laundry.
Blacking for shoes.	Fans and blowers.	Metal-working.
Boilers.	Files and rasps.	Paint and white-lead.
Boiler compound.	Fittings, steam, gas, and water.	Paper mills.
Boiler covering.	Foundry equipment.	Printing.
Bolts and nuts.	Gas meters.	Sawmills.
Boots.	Gas producers.	Soap-making.
Bottle machinery.	Gauges, water, steam, etc.	Motors of all kinds.
Brushes of all kinds.	Glue.	Oilcloth.
Cars.	Gramophones.	Oil and grease for machinery.
Elevators.	Grinding machinery (stones, etc).	Oil purifiers.
Cash boxes.	Hammers, hand and other.	Packing (asbestos).
Castings, bronze and other.	Hardware in general.	Photographic apparatus and supplies.
Cement.	Hose.	Plumbers' supplies.
Cleaners, drain and other.	Injectors.	Pulleys, cast iron, wood, etc.
Emery cloth.	Insulating material.	Pumps of all kinds.
Wire cloth.	Jewelry.	Railway supplies.
Friction clutches.	Kitchen ware.	Rivets, iron and steel.
Air compressors.	Lanterns.	Roofing.
Condensers of all kinds (steam, etc).	Lathes, metal and wood working.	Rope and wire.
Conducts, electrical.	Leather belting.	Rubber goods.
Cordage.	Lumber (poles and ties).	Sandpaper.
Cranes, electric and other.	Machinery:	Tools of all kinds.
Creamery supplies.	Brick-making.	Tramway supplies.
Crushers for stone and ore.	Cement.	Wire ropes.
Cutlery.	Coffee mills.	Trucks of all kinds.
Roll-top desks.	Mining (concentrating and smelting).	Type.
Drilling machines.	Contractors'.	Typewriter supplies.
Dynamos.	Cordage.	Printers' supplies.
		Valves.
		Varnishes.

On the subject of extending the sale of American goods in this country, I may here mention that the agent of one of the principal makers of American shoe machinery and supplies for shoe factories recently spoke to me of the scant support he received in his efforts to increase his sales. He has been given the exclusive sale for Spain, but beyond this the firm in question refuses to assist him, and he is

obliged to defray the cost of all advertising, traveling, and preliminary expenses himself, which are not inconsiderable. He is an excellent agent in every respect, thoroughly versed in his special line, but has only a limited capital to devote to advances he is obliged to make to the firm he represents, seeing that for all goods that he sells he has to pay cash and allow his customers a credit extending to as much as six months and in some cases even longer. This naturally requires the command of a very large capital and prevents his sales from increasing, as they otherwise would. He spoke most encouragingly of the favor that American goods are meeting in all parts of Spain, and if our manufacturers would only show the same eagerness to push their goods in foreign markets as the Germans do their trade would increase by leaps and bounds.

My informant assured me that as soon as some new American device is placed on the market our German competitors promptly imitate it and offer a similar, though usually inferior, machine at a much lower price, along with the additional inducement of a six months' credit. Spanish trade journals are filled with advertisements of German goods and the agents are supplied freely with printed matter in Spanish to distribute among the customers. These are some of the difficulties that those engaged in opening new markets for our goods have to overcome and which I think entitle them to greater assistance on the part of the manufacturers at home.

BARCELONA, SPAIN, *October 23, 1903.*

JULIUS G. LAY,
Consul-General.

AMERICAN TRADE AT NANTES AND ST. NAZAIRE.

(From United States Consul Ridgely, Nantes, France.)

The returns of imports issued by the Nantes and St. Nazaire customs are misleading as far as the imports consumed in this district are concerned.

Owing to the fact that there is no direct line of boats from any port in this region to the United States, nearly all American products are entered either at Havre, Marseilles, or Bordeaux or else come, in many instances, as goods of German, Belgian, or British origin, from Hamburg, Liverpool, and Antwerp. For example, the statistics would make it appear that almost none of the canned meat imported at Nantes comes from the United States, but that virtually all of it is imported from England. The fact is that nearly all this canned meat is of American origin, but it reaches France via Liverpool. This observation, indeed, may be generally applied to all

American products sold in this region, only a very small percentage being imported directly from the United States.

The following table shows the imports at St. Nazaire coming exclusively from the United States during the nine months ended September 30, 1903:

Article.	Quantity.	Article.	Quantity.
Salt pork.....pounds...	3,604	Timber .....tons.....	4,943
Lard.....do.....	4,004	Natural phosphate.....do.....	3,695
Canned fish.....do.....	350	Coal .....do.....	486
Canned lobsters.....do.....	60	Sewing machines.....number...	70
Flour .....do.....	23,324	Casks, with iron hoops.....do.....	627
Dried fruit.....do.....	14,972	Bicycles .....do.....	14
Patent medicine.....do.....	172	Turned wood.....pieces...	249
Machines .....tons...	2½		

BENJ. H. RIDGELY, *Consul.*

NANTES, FRANCE, *November 21, 1903.*

TURKEY AT THE ST. LOUIS EXPOSITION.

(From United States Consul-General Dickinson, Constantinople, Turkey.)

Up to the time of the arrival here, a few weeks ago, of Mr. Thomas W. Cridler, the exposition's commissioner in Europe, the attitude of the Government had been persistently unfavorable to any official participation in the Louisiana Purchase Exposition at St. Louis.

Notwithstanding the frankly expressed opinion of Minister Leishman and myself that the consent of this Government to participate could not be obtained, Mr. Cridler set to work to accomplish his purpose. Through the courtesy of the legation, he was able to go directly to the ministers of the Porte, especially the Minister for Foreign Affairs and the Minister of Commerce and Public Works. He presented to them facts and figures which appear in the records of this office, showing that since the establishment of direct steamship service between Constantinople, Saloniki, Smyrna, and New York, in February, 1899, the freight rate on American goods has been reduced from about 40s. (\$9.73) per ton to 17s. 6d. (\$4.26) per ton; that the commerce between the two countries has immensely increased; that, while the increased imports from the United States can only be estimated, the Turkish shipments to the United States invoiced through these three offices at Constantinople, Saloniki, and Smyrna show an increase from \$3,936,323.92 per annum five years ago to \$8,361,562.25; that the Turkish products invoiced and shipped through Constantinople during the past year

amounted in value to \$4,113,901.23, an increase of fully 140 per cent in five years; that, according to our latest invoice returns, the United States is now buying Turkish products by direct shipments (wholly apart from large sales to England and other countries and intended for the American markets) to the amount of \$10,310,812.25, as against \$5,358,284.16 five years ago; that, comparing these figures with the annual statements of the Turkish custom-house, it appears that the increase in the exports of Turkish products to the United States has been greater than the combined increase of such exports to all the other countries of the world; and that in Turkey's commerce with the United States the balance of trade in favor of Turkey shows a higher percentage than that of any other country of the world.

The Turkish officials expressed themselves as astonished at these figures and asked that they be translated into Turkish, which was immediately done. After careful examination of them—the totals merely are given in the foregoing statement—the Minister for Foreign Affairs assured Mr. Cridler that the decision of the Turkish Government not to participate at the St. Louis exposition would be reconsidered, and he could almost certainly promise a favorable result.

Turkish and other local papers took up Mr. Cridler's convincing presentation of the matter and pointed out that commerce with the United States was of the highest importance to this country. The *Sabah*, the leading Turkish paper, published the figures showing the rapid growth of American commerce and laid especial emphasis upon the fact that the United States and France are the only countries in the world which buy more of Turkey than they sell to it, and for this reason Turkey's participation at St. Louis was of prime importance in order to increase its rapidly growing trade.

The several conversations between the Turkish ministers and Mr. Cridler resulted in a strong recommendation by the Minister for Foreign Affairs in favor of official participation. This recommendation met with the approval of the Council of State and the formal sanction of the Sultan. The Turkish minister at Washington has been appointed special commissioner to the exposition. The highest official circles having thus been brought to examine in detail the extraordinary growth of American commerce, I have no doubt such examination will result in increased facilities for and encouragement of trade between the two countries

CHAS. M. DICKINSON,
Consul-General.

CONSTANTINOPLE, TURKEY, *October 31, 1903.*

No 282—04—5

DRAWBACKS TO AMERICAN TRADE IN BRAZIL.*

(From United States Consul-General Seeger, Rio de Janeiro, Brazil.)

It need hardly be pointed out that foreigners who receive Government contracts in Brazil are placed thereby in positions to help their general trade in the Republic, and therefore that Americans who scarcely ever figure in such contracts are thereby handicapped.

The Standard Oil Company, here and there, supply comparatively small quantities of lubricating oil for the railroads of the Brazilian Government, which is now about all the interest Americans seem to have in governmental contracts.

For a number of years the American Bank Note Company furnished the notes for the Brazilian currency, and another firm printed the postage stamps, postal cards, etc. Although these firms gave absolute satisfaction, their contract was rescinded and the work transferred to an English firm. American houses formerly furnished the Government locomotives and cars, but during the last three or four years they have been out of the market.

The contract for the great harbor improvements to be commenced next January, about which I reported recently, was awarded to a London firm without competition. This contract involves about \$30,000,000.

A large contract for furnishing the Brazilian Government with subsidiary (nickel) coins was awarded last year to a German firm. The official call for proposals was only published in Rio and in London.

The Brazilian Government has to import a large quantity of coal for its railroads and steamers, which have a monopoly of the coasting trade. Official calls for bids are made semiannually and annually. Shortly after taking charge of this post I earnestly remonstrated against the fact that those calls were made for Cardiff coal only, whereupon the calls were changed by omitting the word "Cardiff." The Townes Creek Coal Company, of Virginia, then entered into competition, were subsequently found to be lowest bidders, and complied with all other conditions stipulated in the official call, yet the contract was awarded to an English firm. In one of the last official calls for coal bids it was stipulated that 10,000 of the 50,000 tons to be furnished the Brazilian Government "may be American coal."

* Extract from the annual report of Consul-General Seeger, which will be printed in full in Commercial Relations for 1903.

There are various causes for the discrimination in favor of English importers and contractors, and it is only just to say that as far as the national administration is concerned there is not the least prejudice against the United States and its industries. Brazil is to a large degree financially dependent on England, and as long as this powerful influence exists American competition here will be seriously handicapped.

The leading banks in Brazil are the English banks and the German bank. Although the banking business is very profitable here, Americans have no bank in Brazil. This is another serious drawback to American commerce.

That the United States' share of the imports into Brazil is disproportionately small, I have often emphasized in my reports to the Department, giving reasons and suggesting remedies. I am under the impression that, on the whole, most of our exporters underrate the difficulties of a competition against nations like the English, German, and French, who have been firmly established here for generations, have banks to back them, have hosts of experienced, hard-working representatives who speak the languages current here—Portuguese, French, and German—and who are satisfied with relatively small profits. American manufacturers and speculators, prosperous at home at present, are very reluctant in pioneering abroad to prepare for commercial outlets which may be very necessary in the near future. In Brazil only sporadic efforts are made for American imports. The people of the United States place too much reliance on circulars (English or Spanish) sent here, or on the help the United States consulates can give them. We are not only asked in every mail arriving from the United States to give expert information on topics comprising every field of human activity, but also to procure customers for nearly every product manufactured within the United States.

While the American consuls in Brazil have established a reputation of punctually and cheerfully attending to their correspondence to the best of their ability, they can not supply the industries of their country with a market. This ought to be done by well-trained specialists sent and kept down here for that purpose. Only through hard work, patience, and intelligent effort can the United States exporters secure for themselves their legitimate share of the Brazilian import trade.

The question arises, however, Is this Brazilian import trade at present worth having? On account of the severe economic crisis under which Brazil has been suffering for over six years now, business is hazardous, precarious, and requires close personal attention. The purchasing power of the masses is at a low ebb, and constantly

increased import duties add to the difficulties of the import trade. As long as the price of Brazilian coffee remains as low as it is at present, a material improvement of the commercial conditions of Brazil is not to be expected. The many rich resources of this vast and only partly explored country are merely at the commencement of their development. The present obstacles once overcome, Brazil will undoubtedly have a great future.

EUGENE SEEGER, *Consul-General.*

RIO DE JANEIRO, BRAZIL, *November 25, 1903.*

HINTS TO EXPORTERS INTERESTED IN SOUTH AMERICA.

(*From United States Vice-Consul-General Murphy, Frankfort, Germany.*)

The Berlin South American Outlook publishes in its December number the following items, which it believes may prove useful to German firms interested in trade with the Latin republics of America:

BRAZIL.

Demand for railway materials.—The Companhia Estrada de Ferro Leopoldina has been granted the privilege of free entry for such materials as it can prove that it needs within one year for repairing its lines and increasing its rolling stock and other property.

Waterworks for the city of Rio Grande.—A project for supplying the city of Rio Grande with water has been prepared by the Companhia Hydraulica Rio Grandense and submitted to the municipal government of that town.

Electric power for the State of Minas Geraes.—The British consul-general at Rio de Janeiro reports that the erection of small electric-power plants in the southwestern part of the State of Minas Geraes would perhaps be a profitable venture. In this agricultural district there are, in addition to the great fazendas, a great many small towns having from 1,000 to 10,000 inhabitants. The electric energy, for the production of which water power exists in sufficient quantity, could be used for lighting purposes, for ice and butter fabrication, for operating small machines, and for other purposes.

Electric railway between Rio de Janeiro and Petropolis.—A concession has been granted to a civil engineer, Mr. Eugenio de Andrade, for the building of an electric railway between Rio de Janeiro and Petropolis. Work must be begun within two years.

New central market hall for Rio de Janeiro.—The Companhia Edificadora, which holds the contract for building a new central

market hall in Rio de Janeiro, is receiving bids for supplying materials needed for the inner frame of the hall.

ARGENTINE REPUBLIC.

Market for musical instruments.—According to the London Commercial Intelligence, there is a large demand in the Argentine Republic for musical instruments, especially for guitars and mandolins, which are in demand at every ranch. As a rule the demand is limited to cheap sorts. There is also a good demand for strings and other parts of the instruments which need occasional renewing.

Harbor on Rio Parana.—Messrs. J. R. Botet & Co. have received a concession for building and controlling a sea harbor 6.7 meters (22 feet) deep, near the lands of the River Plata Fresh Meat Company (Limited), in Campana, on the Rio Parana de las Palmas, and also for the construction of a canal 60 meters (185 feet) wide and 6.7 meters (22 feet) deep, connecting this harbor and Platos Grandes, on the Rio Parana Guazu.

CHILE.

Improvement of harbor of Constitucion.—The execution of the project for the improvement of the harbor of Constitucion has been intrusted to an engineer named Hijinio Gonzales.

Proposed railways.—The Compania del Ferrocarril de Taltal Limitada has received from the Ministry for Industry and Public Works a concession for the extension beyond Atacama of a branch line now under construction. The survey must be completed within three months.

A concession for a railway from Mineral de Conchi to a station of the same name on the Bolivia Railway has been granted to Luis E. Browne, agent of the Sociedad de Minas i Fundacion de Calama. Work must be begun within six months.

PERU.

Market for wire rope.—The Peruvian Government intends to make purchases of wire rope and other materials for use in building bridges in the cordilleras.

Market for drainage pipes, etc.—In connection with the extension of the sewerage system of Callao a demand will probably arise there in the near future for drainage pipes.

New government building at Lima.—The proposed erection of a new government building in Lima will result in a large demand for construction iron.

Ovens for burning street sweepings.—The advisability of purchasing ovens for burning street sweepings is now being discussed in Lima.

Owing to lack of available means, however, no purchases will be made at once.

New railways.—The British minister at Lima reports that a concession has been granted for the construction of a railway from Chimbote to Recuay. At present surveys are being made in various parts of the country for projected lines of railway.

War material, etc.—The Presidential message to the Peruvian Congress calls urgently for the purchase of a cannon boat and a school-ship, as the war ships now on hand are not worth repairing. Furthermore, the message says, the reorganization of the army and the acquirement of war material can be delayed no longer.

ECUADOR.

Market for agricultural articles.—Agriculture is carried on in a very primitive way in Ecuador. Manures are seldom used. Modern plows and other new agricultural implements are unknown. The approaching completion of the Guayaquil-Quito Railway may have an important effect upon the development of agriculture and the importation of agricultural machines and implements.

GEORGE H. MURPHY,
Vice-Consul-General.

FRANKFORT, GERMANY, *December 5, 1903.*

CHILEAN-UNITED STATES TRADE.

(From United States Consul Mansfield, Valparaiso, Chile.)

The value of the imports into Chile from the United States greatly exceeds Chilean exports to the United States. In the eight years from 1895 to 1902, inclusive, Chile imported from the United States merchandise to the value of \$34,287,648, while Chilean exports to the United States during the same period amounted to only \$22,820,832, a balance of trade in favor of the United States of \$11,466,816 in the eight years, or an annual balance of \$1,433,352.

DRAWBACKS TO AMERICAN TRADE WITH CHILE.

Conditions that have operated against a further increase of trade in American goods in Chile are the lack of transportation facilities, the high transportation rates, and the refusal of American manufacturers and exporters to grant the long-time credits asked by Chilean importers, in which they are especially favored by Germans.

Another feature that can not consistently be omitted from any report concerning trade conditions between the United States and

South American markets is the lack of care, or apparent indifference, on the part of American exporters in properly packing and marking goods for shipment to this market. Recently a consignment of 100 cooking stoves arrived at Valparaiso from New York in such a damaged condition that they were practically valueless. The damage was due entirely to poor packing. The loss will probably result in a suit for damages; but, worse than damages, it greatly lessens the chance of placing further orders with American firms for similar goods.

AMERICAN GOODS CONSUMED IN CHILE.

Machinery of various kinds, including agricultural implements, forms an important item in the import trade of Chile, a large part of which comes from the United States. The total value of farm machinery and agricultural implements imported into Chile in 1902 was \$635,845, of which the imports from the United States amounted to \$329,361. All the machinery imported during the year amounted to \$2,324,446, of which \$1,062,490 represented the imports from the United States. Of the oil imports petroleum represented \$876,427, and of this amount the imports from the United States were valued at \$826,161.

Until recent years lumber formed an important item in the import trade of Chile, the supply coming chiefly from the United States. The importation of lumber is, however, decreasing because of the development of large lumber interests in the Republic. In the Provinces of Arauco, Cautin, Valdiva, and Llanquihua, in the southern part of Chile, are vast forests of fine lumber-producing timber, which is attracting the attention of capitalists and manufacturers. A number of sawmills are now in operation in that section cutting lumber for the local market, which was formerly supplied largely with Oregon pine.

There is considerable import trade in Chile in American builders' hardware, the most important item of which is nails. The total value of nails imported amounted to \$170,759 (cut, \$126,505; wire, \$44,254), of which the United States supplied \$74,470 worth of cut nails and \$9,813 of wire nails. The importation of nails from the United States is increasing, the imports for the first nine months of the year 1903 showing an increase over any similar period in the past. The records show that from January 1 to September 30, 1903, 8,874 kegs of nails were received from the United States.

R. E. MANSFIELD, *Consul*.

VALPARAISO, CHILE, *October 1, 1903*.

AMERICAN VS. EUROPEAN TRADE WITH MEXICO.

(From United States Consul-General Barlow, Mexico City, Mexico.)

While the imports from the United States during the fiscal year ended June 30, 1903, show an increase of \$1,479,995.88 over those of the preceding year, the imports from Europe show an increase of \$7,826,091.18. The fiscal year 1901-2 showed an increase of imports from the United States of \$2,249,213.49, or about 6 per cent over the fiscal year 1900-1901, while imports from Europe during the same year showed a decrease of \$2,576,860.13, or a little over 9 per cent, compared with the preceding year. Imports from the United States during the fiscal year ended June 30, 1900, amounted to 50.06 per cent of the total imports into Mexico, against 53.35 per cent, 57.89 per cent, and 54.06 per cent during the three preceding years, respectively.

This falling off may be attributed to several causes: (1) A large amount of steel rails were imported from Europe for railroad construction because American manufacturers were unable to fill the orders; (2) a large amount of German coke was imported, which trade the United States could have secured; (3) a large amount of minor supplies and miscellaneous articles were imported from Europe principally through lack of attention to details on the part of American exporters; (4) imports from the United States include everything that comes into Mexico from the United States, whether it be American merchandise or merchandise in transit through the United States, and it may be that the establishment of increased direct water communication between Europe and Mexico has diverted a considerable amount of imports formerly credited to the United States to direct importations from Europe.

The fact stands out, however, that American exporters are losing Mexican trade by carelessness and bad business tactics. It does not pay the American business man to attempt to thrust his business methods upon foreign people. He may think his business methods better than the business methods of other people, and he may be right, but he must not insist upon it when he is trying to sell goods. Germany shows a large increase in her trade with Mexico during the past year, which is probably due, in a great measure, to the fact that German manufacturers are willing to make articles that Mexicans want, instead of trying to convince them that some other articles are better; also to the fact that German houses doing business with Mexicans are willing to do business in the Mexican way, and

do not insist upon doing it in some other way, and that the average Mexican very frequently has to sacrifice quality to price. The system of long credits offered by European houses has been an especial advantage to Mexican buyers during the past year and a half. When exchange is fluctuating wildly the Mexican merchant likes to have the advantage of a long time in which to make payment for goods, so that he may take advantage of a temporary low rate of exchange to make his remittances.

American exporters doing business with Mexico are weak in detail. European houses having business relations in this country watch every detail, such as exchange, temporary need for a certain commodity, temporary stringency of the money market, and all other things which may affect their trade, while American houses seldom pay any attention to these "little things." The American exporter has every natural advantage over his European competitor in securing Mexican trade, but it will not do to rely too much upon proximity or past business conditions.

Bad judgment is frequently used in advertising by American houses trying to build up a trade with Mexico. An example came to my knowledge recently. A local concern received a sample can of condensed milk from a house in the United States upon which it had to pay \$1.35 express charges. If American houses desire to send samples of their products to Mexico they should be sure that all charges are prepaid. Another case in mind is that of a certain line of breakfast food that is advertised extensively in the English press of Mexico and that is more or less popular with Americans residing in Mexico. Its packages are prepared in exactly the same way as if for consumption in the United States, with the matter on the boxes printed in English. Another house manufacturing breakfast food that is not nearly so popular in the United States as the first mentioned covers its boxes with Spanish reading matter, does its advertising in Spanish, and it has therefore secured a practical monopoly in the trade in breakfast foods in Mexico.

ANDREW D. BARLOW,
MEXICO CITY, MEXICO, *November 24, 1903.* *Consul-General.*

ANTIGUA-AMERICAN TRADE.

(From United States Consul Estes, Antigua, British West Indies.)

As to the articles in which our trade with Antigua might be increased, especially under a lower freight rate, I might call attention to flour, butter, potatoes, general groceries, cotton and woollen cloth, hardware, jewelry, boots and shoes, drugs, soap, lumber, and shingles.

I can not refrain from referring to the method of doing business through commission merchants in New York. It seems to me that if the merchants here could deal directly with manufacturers or jobbers in the United States they could procure their goods at much more advantageous prices. From the goods on which I have quotations I am satisfied that the Antiguan purchasers are made to pay prices to the commission merchants that are unreasonable. As an instance, a merchant thought he would introduce the American wagon to take the place of the heavy carts on the Antiguan estates. He ordered some and was charged \$100 f. o. b. New York, when the same wagon should have been furnished for \$50, or certainly not to exceed \$60, with all expenses paid. Other instances of the same kind have come to my notice.

Canada is pushing hard for the trade of the British West Indies, and with this handicap on our trade and the subsidized line of steamers running regularly between Halifax and the islands, it has made rapid progress in the last year. Canada also takes much of the sugar of Antigua.

I refrain from suggesting methods of improvement at the United States end of the line. I only point out the defects and leave it to those who are directly interested to apply the remedies. Even under the present great difficulties we are getting a good share of the trade, but there is no reason why it should not be increased.

W. R. ESTES, *Consul*.

ANTIGUA, BRITISH WEST INDIES, *November 25, 1903.*

BAHAMAS-UNITED STATES TRADE.

(*From United States Consul McLain, Nassau, Bahamas.*)

IMPORTS AND EXPORTS.

The total value of the exports from the Bahamas during the six months ended June 30, 1903, can be safely stated at about \$525,000, while the imports reached the sum of \$750,000. Of the exports, about \$500,000 worth went to the United States, and of the imports about \$600,000 worth came from the United States.

During the six months there were shipped to the United States as follows:

Bark.....	\$4, 500
Grape fruit.....	2, 000
Oranges.....	2, 500
Pineapples	175, 000
Preserved fruits.....	5, 000
Hemp.....	90, 000
Sponges.....	125, 000
Turtle-shell.....	5, 000
Woods	5, 000

In return, this colony took from the United States:

Beer	\$2, 000
Butter.....	16, 000
Cattle	5, 000
Coffee.....	5, 000
Corn meal and hominy.....	30, 000
Cotton, linen, silk, and woolen goods	60, 000
Earthen and glass ware.....	80, 000
Salted meats.....	35, 000
Flour	100, 000
Ice.....	5, 000
Lard	10, 000
Lumber	35, 000
Oats and bran.....	8, 000
Oils	12, 000
Preserved fruits and meats.....	20, 000
Tinware and hardware.....	18, 000
Tobacco.....	15, 000

SPONGE INDUSTRY.

The sponge industry continues to be the most important business of the colony, and the amount taken by the United States maintained about its usual proportion, reaching some \$275,000 per annum. The trade was, for a portion of 1902, rather dull, but during the first six months of 1903 it began to recover.

FRUIT TRADE.

The crop of pineapples was fairly good, prices ranging rather lower than usual. More than \$150,000 worth was shipped to the United States. There was some increase in the number preserved. Some guavas were also preserved. The orange and grape fruit came into market later in the season. The quantity of grape fruit is increasing. A destructive hurricane has just passed over this colony, which will seriously injure the orange and grape-fruit crops for the ensuing fall.

HEMP TRADE.

The increase in the quantity of hemp produced is quite marked, and this industry will continue to prosper. Over \$100,000 worth was exported, mostly to the United States, during this period.

AGRICULTURE.

Although considerable is done in the way of agriculture, there is little in the sale or use of machinery, the soil being altogether too rough and rocky. The implements in use are of an old-fashioned kind.

PACKING AMERICAN GOODS.

The method of packing American goods for shipment to the colony is entirely satisfactory, and there is no call for any changes in the matter. Our shippers pay special attention to this work.

STEAMSHIP COMMUNICATION WITH THE UNITED STATES.

Three steamers per month still continue to perform the service, furnishing abundant, speedy, and prompt service. Two of the ships are American, under a colonial mail, freight, and passenger service, and the other is working independently. During the six months ended June 30, 1903—especially during the four months of January–April—we had two or three steamers per week plying between Miami, Fla., and Nassau. This service is made necessary by reason of the two hotels here being open up to April of each year, and being largely patronized from November to April by traveling Americans. The hotels belong to the Florida East Coast Hotel Company, and during the past two winters they have entirely filled the requirements demanded by the constantly increasing travel of winter tourists and sojourners in this colony.

THOS. J. McLAIN, *Consul*.

NASSAU, BAHAMAS, *October 3, 1903*.

TRADE SUGGESTIONS FOR SOUTH AFRICA.

Export, the organ of the German Central Society for Commercial Geography, etc., published in Berlin, in its issue of October 22, 1903, says:

We have received from a firm in Kapstadt, the members of which are engineers, and who also do repair work, the following communication dated September 30, 1903:

"We are ready to undertake the representation of a few German factories in articles pertaining to the building trade and the making of machinery—*e. g.*, we are interested in steel girders and iron for building purposes, cement, lime, paint, etc.; also in building materials for trellises in gardens, etc.; in gas and petroleum motors for passengers and freight.

"Long credits should be given here, generally four months after receipt of shipping documents upon arrival of steamer at Kapstadt. Above all, we give preference to German firms, but if we are to secure business in South Africa we must meet the competition of the English by giving better terms. The following example may be given in this connection: A book printer went to an Englishman representing a German house to buy a new printing press, but the printer was persuaded to buy an English make of press on account of getting better terms than the German house could offer. If German houses will succeed in their foreign trade, they must study the customary terms of credit in the country and not limit themselves to the formula, 'We desire payment before shipment of goods.'"

INDIAN-AMERICAN TRADE.

The following article appeared in the January (1904) *Anglo-Indian Review*:

There is every indication of a steadily growing commercial relationship between India and the United States, and our astute cousins seem determined to cultivate it. Backed up by a singularly persistent consul-general at Calcutta, who knows his subject and whose faith in India's commercial importance is perhaps not less than our own, the American Government has taken the trouble to lay before its traders the position which India holds among the markets of the world. Of course, that position is well known to readers of the *Anglo-Indian Review*, and there is no reason for reiterating it. To Americans, however, it is perhaps not so obvious, and it is probably for this reason that the Washington Bureau of Statistics in the latest issue of its model reports draws attention to the fact that more than 50 per cent of the imports of India are of a class which might be called indigenous to the United States, and a greater part—fully three-fourths—of the whole is made up of goods successfully produced by and exported from the United States; consequently, it is lamented that less than 2 per cent of Indian imports come from America. Well, the proportion is small, but there is no reason for despondency. In a free market the cheapest and best will ultimately win. As Consul-General Patterson rightly says, there are no restrictions on trade in India, and therefore no reason why American exports should not compete successfully, especially in cotton goods and iron and steel manufactures. On the face of it it says a good deal for the esteem in which British manufacturers are held in India that importations from the United Kingdom continue to increase in proportion to the rapid growth of the total import trade. This is not the case with America. In 1899 the United States supplied 2 per cent of India's imports; in 1900, 1.7 per cent; in 1901, 1.6 per cent; in 1902, 1.4 per cent; but it should be remembered that American trade is badly handicapped by the want of an efficient steamship service. The only way to ship goods from New York to Calcutta is via Glasgow, Liverpool, London, or Naples. As a consequence, the goods are frequently delayed a long time waiting transshipment, and are often not received until after they are required. This is undoubtedly the greatest drawback which one meets in the extension of American trade with India, and, curiously enough, there does not seem to be any present idea of overcoming it. Nevertheless, it will undoubtedly come in time, for there is another aspect in the study of Indian-American trade relationships. While, as we have said, the volume of trade is not increasing proportionately to the growing total of importation, India's exports to America are assuming very large proportions. Indeed, in manufactured products America is one of India's best customers. In ten years she has taken jute manufactures to the value of about £2,000,000 (\$9,733,000) unmanufactured jute worth about £800,000 (\$38,932,000), and hides and skins to the value of nearly £2,000,000. This latter item alone has nearly doubled during the past four years. It will therefore be seen that the American desire to cultivate Indian trade is of a reciprocal nature, and, being so, British traders can have no cause to view with alarm such developments as will be shown in the near future, for it is not the nature of their trans-Atlantic competitors to neglect such a remunerative market as India affords for American manufactures.

OPPORTUNITIES FOR AMERICAN MERCHANTS IN MANCHURIA.

INTRODUCTION.

The building of the great Siberian Railway has helped to open up a new world to the merchants and manufacturers of the West. Lands which hitherto it took three, four, five, and six months to reach may now be entered in the short period of thirty days. The whole western world is intensely interested in every effort being made to open Manchuria, eastern Siberia, and the vast Provinces of Asia to the merchants and manufacturers of the West. The economic and industrial papers of Europe teem with reports and articles concerning the opportunities offered by these vast lands to different people of Europe.

The Russian-German Messenger, "Der Russisch-Deutsche Bote," published in Russian and German, devotes many pages to the consideration of the economic problems of Siberia, Manchuria, and Asia. From an article written by Ferdinand Meinecke, for four years a merchant in Siberia, many of the following notes have been extracted. Among other things he says that the principal business in eastern Siberia is in the hands of some Russian and German wholesale houses. They have covered all the important places of Siberia and Manchuria with retail branches carrying all classes of goods. The exchange of goods for goods instead of for money has not been entirely eradicated in some wild regions of the Far East. Skins of tigers, bears, and sables are exchanged both for commodities and for money.

DANGERS OF DELAY.

The evil connected with all the Russian trade, and one to be avoided by western merchants seeking an entrance into this market, is the delay in delivery after orders have been secured. Cheap freight rates along the rivers are only possible during the summer months, inasmuch as the rivers are frozen over during the remainder of the year. The result of delays is that goods are often delivered at a time when the rivers are icebound and when it is impossible to forward them by the cheap water freight rates, in which case it is necessary for the wares to remain useless in the warehouses. Since the building of the railroad, however, goods, of course, can be forwarded by rail, but at much greater cost. Cities like Vladivostock and Chabarowsk and cities in Manchuria can, when necessary, get their goods shipped by rail. In spite of this fact most of the firms

in the East prefer to have goods come to them by sea and river transportation, since it is cheaper and because the railroad in many cases is somewhat uncertain; in addition, many wares in shipment are broken or stolen, and all complaints for damages are, as a rule, disregarded. Great efforts are being made by the local authorities of the Far East to get better connections for their cities with the western traffic. As soon as these connections are made, vast regions with immense natural and mineral resources will be opened to the western world.

PLANTING COLONISTS.

In order to get the most out of these regions it will be necessary to encourage the immigration of miners and farmers. It is reported that the Russian Government is about to put at least 1,000,000 of its European farmers into that far eastern section. After this is done there can be no doubt of the vast extent the commercial and industrial relations in those parts will assume.

INFLUENCE OF TARIFF.

The importing business of eastern Siberia was materially affected by the introduction of the protective tariff, which is so high that business men have found it impossible to import many foreign articles. It is easy to understand that the Russian Government has put this tariff in operation for the protection of its own industries, although one can hardly say much concerning home industries in eastern Siberia up to the present time. Besides, it is a well-known fact that the industries of European Russia are hardly in a position to supply many of the articles needed in a new country like Manchuria and eastern Siberia. Hence, the merchant in the Far East will have to rely upon European and American manufactures to satisfy the necessities of his client. Exporters will make every effort for prompt deliveries and always up to sample in order to hold old customers and for the purpose of securing new. The writer from whom these notes are being taken liberally says that Germany's greatest competitor in the East and in East Siberia is the American; and to keep step with the American for any length of time will be a very difficult task. Above all things, Germany, he says, must work to secure the success which in the last ten years it has won in the East against the English. A new working field for the German export trade is offered at Port Arthur and at Dalny. Both of these places were for a long time free trading places, but quite recently were placed under a protective tariff. As Port Arthur is almost exclusively a naval port, the situation of Dalny, it seems, will cause the bulk of exports and imports to go through it. Thus

Dalny, in spite of its recent coming into existence, has already become an important business city and seems to have a greater future in store, since the trade with all Manchuria will go in and out of its gates.

LINGUAL DIFFICULTIES.

One great difficulty for foreigners in eastern Siberia is the Russian language. Russians do all in their power to make themselves understood when questions of trade are involved. People in commercial and industrial circles do all they can to make the life of foreigners as pleasant as possible. In general, clever young Germans are engaged in the mercantile business in Siberia and Manchuria at wages which afford them little more than a bare living, all the necessities being very expensive. One who expects a position in that far country can not hope to do very much more than to buy necessities and to learn the language and conditions under which trade is carried on. Everybody going there should make it a point to be well prepared with clothing and other necessary equipment for the undertaking in which he is to engage.

In the cities along the border lines between Russia and China the Chinese element is largely predominant. These people are welcome in the cities because of their willingness to work, their peaceful disposition and their desire to live and to work and to be let alone. They are industrious, tireless in their efforts, and far superior to most others.

GOODS WANTED.

The best lines of goods to send into eastern Siberia and Manchuria are various agricultural and industrial machinery, tools, woolen cloths of all kinds, cotton cloths to a certain extent, hardware for the kitchen and for the one thousand and one purposes to which articles of hardware can be put, and some articles of luxury. The largest sales in eastern Siberia will be, of course, for agricultural machinery. The demand for these machines will increase with the development of the agriculture of the country. The writer says, in conclusion, that, according to his own experience, preference is given in eastern Siberia to German machinery for the farm over American machinery because the construction of the German machine is more solid. Whether this is so or not is, of course, another question. Efforts on the part of American manufacturers to enter the field and to demonstrate the superior services to be obtained by their machines will be of great value to the American manufacturers.

PREFERENTIAL TRADE IN AUSTRALASIA.

(From United States Consul-General Dillingham, Auckland, New Zealand.)

INTRODUCTION.

The premier of New Zealand recently introduced in the lower house of parliament a preferential trade bill, which passed its third reading and became a law November 19. The title of the bill is, "An act to encourage trade with the British Empire by imposing extra duties on certain imports, and to provide for reciprocal trade with foreign countries." The more important clauses of the bill read as follows:

From and after the passing of this act there shall be leviable on the several articles mentioned in the first, second, and third schedules hereto imported into New Zealand, and not being the produce or manufacture of some part of the British dominions, in addition to the duties authorized under any tariff for the time being in force in New Zealand, the following duties: (a) On the article specified in the first schedule hereto an amount equal to the amount payable under the said tariff; (b) on the articles specified in the second schedule hereto an amount equal to one half of the amount payable under the said tariff.

From and after the passing of this act there shall be leviable on the several articles mentioned in this schedule hereto imported into New Zealand, and not being the produce or manufacture of some part of the British dominions, duties of customs equal to 20 per cent of the value for duty as defined by the principal act, or by any act amending the principal act.

On the importation of any articles mentioned in the schedules hereto the importer or his agent, in addition to particulars required by the principal act to be given on entry of dutiable goods, shall state, to the best of his knowledge, information, and belief, the country of which such goods are the product or manufacture, and shall satisfy the collector by declaration or otherwise of the truth of such statement.

If a collector has reason to believe that any goods are not the produce or manufacture of the country stated on such entry, he may detain them for examination, and if after due inquiry he is satisfied that such statement was false the goods shall be forfeited and dealt with as directed by the principal act in the case of forfeited goods.

With respect to all articles mentioned in the schedules hereto imported into New Zealand after June 30, 1904, (a) the full duty under this act shall be payable, unless there is produced to the collector an invoice of the goods, having written or printed thereon a certificate, signed by the sender or consignor in such form as may be prescribed, that they are the produce or manufacture of some part of the British dominions named in the certificate; (b) no such invoice shall relate to any goods other than those to which the certificate refers; (c) where goods are imported in packages such packages shall not contain any goods other than those specified in the invoice, and if any other goods are found in any such package they shall be forfeited; (d) every importer or agent of an importer who produces any invoice or certificate under this section, knowing the same to be false in any particular, is

liable to a fine not exceeding £100 (\$486.50) or, at the option of the commissioner, to treble the value of the goods specified in such invoice.

From and after March 31, 1904, no duty shall be leviable on tea grown in any part of the British dominions; (2) the provisions of sections 3 to 5 hereof shall apply to every importation of tea after the date last mentioned.

In any proceedings arising under this act the onus of proof that any goods are the produce or manufacture of any part of the British dominions shall be on the importer, and the governor may from time to time, by order in council gazetted, make regulations for carrying this act into effect, and may impose fines for the breach of such regulations not exceeding £100 (\$486.50).

Where any country not being part of the British dominions reduces or abolishes, or proposes to reduce or abolish, the duty on any product or manufacture of New Zealand, the governor may enter into an agreement with that country to reduce or abolish the duty on any article or articles the produce or manufacture of such country, to an extent that the estimated revenue so remitted shall equal as nearly as possible the estimated revenue remitted by that country, provided that no such agreement shall have effect until ratified by parliament.

SCHEDULES.

First schedule.—Cement.

Second schedule.—Basket and wicker ware n. o. e. (not otherwise enumerated), not being furniture; bicycles and the like vehicles, also finished or partly finished or machined parts of same, n. o. e., including weldless steel tubing cut to short lengths; boots, shoes, and slippers n. o. e.; goloshes, clogs, patterns, vamps, uppers, and laces; candles; carriages, carts, drays, wagons, and perambulators and wheels for the same, carriage shafts, spokes, and fellies, dressed bent carriage timber n. o. e.; china, porcelain, and parian ware; clocks, cordage, and rope n. o. e.; cream of tartar; earthen, stone, and brown ware; fancy goods and toys; firearms of all kinds; fish, potted and preserved; furniture and cabinet ware n. o. e., and other than iron; glass, crown, sheet, and common window glass ware; also plate glass and glass, polished, colored, and other kinds n. o. e.; globes and chimneys for lamps; hardware, ironmongery, and hollow ware; hoops; iron nails, iron pipes, and fittings for the same, including main cocks; lamps, lanterns, and lampwick; musical instruments, viz, pianos; paper hangings, paper wrappings, viz, blue candle, glazed cap, glazed casings, small hand lumber, hand and tissue paper, wrappings and other kinds, including brown cartridge and sugar papers; plate and plate pumps, and other apparatus for raising water.

Third schedule.—Bicycles and tricycles, fittings for, viz, rubber tires, pneumatic tires, outside covers and inner tubes, rubber and cork handles and peddle rubbers, drop for gongs and stampings, ball bearings, weldless steel tubes in full lengths, rims, forks, and spokes in the rough; gas engines and hammers and oil engines; gum boots; iron and steel cordage, iron, plain black sheet rod, bolt bars and plate iron, wire netting, printing paper, rails for railways and tramways, sailcloth, canvas and unbleached double-warped duck, surgical and dental instruments and appliances.

OPINIONS DURING DEBATE.

In introducing this bill the premier stated that it was his intention to take up the debate immediately, and the debate began on Wednesday afternoon. The bill met with considerable opposition, many members of the house claiming that it would be suicidal to

rush the bill through without giving the members time to thoroughly study and digest it. Against these many objections the premier strongly protested on the ground that they would prejudice the bill before the country. He said that in its proposals he had guarded against doing anything that might cripple the colony's manufacturers, and if, incidentally, he could help the mother country as against foreign countries without raising barriers against her it was his and parliament's duty to do so.

In moving the second reading of the bill on Wednesday evening the premier said he thought that in dealing with the question he had a grave responsibility cast upon him. He did not know that there had ever been a time when there was a greater demand for those who wished the Empire well to do what they considered to be their duty. He believed it was their duty to give preferential trade to the Empire; that in this bill they made no distinction as against any part of the Empire, and in that respect their proposals were wider than those given effect to by Canada. The question was whether they should make a distinction between their own kindred and alien nations, and declared that it was their duty to do so with no uncertain sound. By so doing they were affirming a great principle. He asked nothing from the mother country in return; he had invariably refused to ask for anything in return. In fact, he had always left it to the imperial authorities to give something if they thought proper. It had been suggested that they should have reduced the tariff in favor of British imports, but that would have injured the commerce of the country; and those who favored such a move would have to show how it could be done without injuring the colony's industries and reducing its revenues. The main question was whether New Zealanders would assist the mother country or go on feeding alien nations by continuing to give them their trade. He could say for the people of New Zealand that their loyalty was more than skin deep, and that they were prepared to do their share in keeping the grand old flag flying. He admitted that the proposals might not be economically sound, but it was a political necessity, forced on the colony by other countries—a necessity increased by the apathy shown by those in the mother country.

The premier touched on Lord Salisbury's remarks in 1895 regarding retaliation against foreign nations in the interests of the trade and industry of the Empire, and dwelt at some length on the decadence of trade in the old country of late years in consequence of the encroachments of foreign traders, and said that trade did not follow the flag, but followed the ship. The premier then devoted some time to describing the methods of foreign nations in underselling in British markets, and strongly urged that the time had arrived for

them to speak out and say that they were not prepared to allow these trade vampires to further suck the blood of the colony's commerce. Referring to the increase of duty proposed on boots and shoes, he said it would not affect the people of the colony at all, except in regard to foreign articles, and the colony would be fully able to meet the requirements. The premier then spent much time in quoting figures showing how imports from foreign countries to New Zealand had increased of late years, particularly those from the United States, an increase which, he contended, showed that it was necessary to take some definite action in the matter. He also called particular attention to the comparative increase of the exports of the United States and other countries and those of Great Britain between 1892 and 1901, and said as compared with other countries Great Britain was losing ground, and even those who did not go as far as Mr. Chamberlain did were convinced that the time had come for some fiscal change and for careful inquiry. Matters were growing worse, and it was time for the colony to stem the tide. He hoped and thought this bill should be passed with that unanimity and cordiality which had always characterized the attitude of the colony toward the mother country.

The premier then pointed out that it was proposed, by remitting duty on British-grown tea, to give away £40,000 (\$194,660) per annum, which should be more than sufficient to meet the increased duties imposed on goods from foreign countries. Mr. Massey, the able leader of the opposition, said the speech of the premier did not impress him as being convincing. It contained, he thought, a great deal of jingoism, but very little about the subject under discussion. In fact, its effect on him (Mr. Massey) had been that he was not now so strong on the preferential trade as he was an hour and a half ago. In his opinion, it was quite impossible to do justice to the subject this session, and nothing would be lost by delay. In fact, the colony would gain by delay, because it would then have a lead from the old country. He, with others, had looked upon these preferential proposals as likely to bring them nearer to free trade, but he did not think so now. What was really proposed by the premier was to increase taxation and protection. The people at home had made up their minds that it would take years to arrive at a decision on this momentous question, yet the premier asked the house to devote only one night to these wretchedly crude and imperfect proposals. One reason for this bill, he thought, was the premier's desire for an imperial advertisement. In his (Mr. Massey's) opinion, the house should first decide whether a preferential tariff was advisable, and then set to work to revise the tariff in a business-like manner, as Canada had done.

RELATIVE VALUE OF IMPORTS OF BRITISH AND FOREIGN GOODS.

The existing rates of duty on the articles affected by the preferential and reciprocal trade bill, and the value of last year's imports, are as follows:

Article.	Unit.	Rate of duty.		Value of imports.		
				British.	Foreign.	United States.
<i>Schedule I.</i>		<i>s. d.</i>				
Cement.....	Barrel.....	2 0	\$0.48	\$263,465	\$1,800	.....
<i>Schedule II.</i>						
Basket and wicker ware n. o. e.....	Ad valorem..	20 p. ct.	.....	7,400	7,720	.....
Bicycles, tricycles, etc., and parts.....	.....do	20 p. ct.	.....	353,325	112,225	\$108,220
Boots, shoes, etc.....	.....do	22½ p. ct.	.....	542,295	413,725	413,725
Candles	Pound	0 1	.02	195,555	8,235	6,560
Carriages, etc., and carriage shafts, poles, etc.	Ad valorem..	20 p. ct.	.....	46,055	56,550	36,105
China, porcelain, etc.....	.....do	20 p. ct.	.....	109,930	20,000	260
Clocks.....	.....do	20 p. ct.	.....	20,895	43,495	39,395
Cordage and rope n. o. e.....	.....do	20 p. ct.	.....	60,675	9,910	9,445
Cream of tartar.....	Pound.....	0 1	.02	84,065	71,935	.....
Earthen, stone, and brown ware...	Ad valorem..	20 p. ct.	.....	313,355	17,870	7,215
Fancy goods and toys.....	.....do	20 p. ct.	.....	558,585	170,015	44,730
Firearms, all kinds.....	.....do	20 p. ct.	.....	32,310	38,860	.....
Fish, potted and preserved.....	.....do .....	.....	.....	137,805	73,315	73,315
Furniture and cabinet ware n. o. e..	Ad valorem..	25 p. ct.	.....	97,790	77,985	46,160
Glass, crown, sheet, and window...	100 sup. feet..	2 0	.48	136,140	23,190	.....
Glassware, also plate glass, etc., n. o. e.	Ad valorem..	20 p. ct.	.....	195,635	93,415	42,745
Hardware, ironmongery, and hollow ware.	.....do	20 p. ct.	.....	1,111,955	287,385	236,510
Hops	Pound.....	0 6	.12	10,120	11,845	9,855
Iron nails.....	Cwt	2 0	.48	71,800	147,165	.....
Lamps, lanterns, and wicks.....	Ad valorem..	20 p. ct.	.....	62,300	48,700	36,250
Pianos.....	.....do	20 p. ct.	.....	164,865	259,340	.....
Paper hangings.....	.....do	15 p. ct.	.....	140,045	26,590	23,225
Paper wrappings.....	Cwt	5 0	1.21	20,480	8,955	3,990
Plate and plated ware.....	Ad valorem..	20 p. ct.	.....	214,740	21,576	18,320
Pumps.....	.....do	20 p. ct.	.....	12,110	27,810	27,070

The imports of tea, which pays a duty of 2d. (4 cents) per pound, were: British, \$985,550; foreign, \$85.

The total value of the imports last year of the articles affected by the bill was \$8,023,935. Of this, \$5,949,240 came from the United Kingdom and possessions, \$2,072,195 from foreign countries, and \$1,183,095 from the United States.

The following are last year's imports of goods then free but to be charged 20 per cent duty under the new bill, when of foreign manufacture:

Article.	Value of imports.		
	British.	Foreign.	United States.
Iron and steel.....	\$1,050,785	\$201,550	*\$201,550
Printing paper	309,500	232,745	227,775
Gas engines.....	118,675	78,100	.....
Canvas.....	138,515	57,495	57,495
Cordage.....	108,585	19,615	9,445
Bicycles and tricycles, fittings for	164,595	40,740	.....
Surgical and dental instruments.....	69,825	50,020	47,065
Gum boots.....	31,625	19,060	19,060

* The iron and steel imports from the United States were classed as follows: Fencing wire, barbed, \$104,285; plain, \$165,765; all other iron and steel goods, \$21,500.

PUBLIC OPINION.

Several firms in Auckland have been interviewed in regard to this bill, and those who import little or nothing from the United States generally favor it. The managing director of one of Auckland's well-known ironmongery and hardware firms said that the question opened up by the premier's new bill was a very large one, one on which a decisive opinion could be offered only after the matter had been weighed in all its various bearings; that the farmers were not likely to receive the bill with open arms. Take, for instance, the one item of fencing wire. The premier has claimed to be a benefactor to the farmers, because he took the duty off fencing wire and placed it on the free list. At the present time the English wire is about 30s. (\$7.20) per ton dearer than American wire; but, with the preferential tariff, America will be put out of the market by English goods, and the probability is that the farmers of New Zealand will have to pay about \$10 a ton more for their wire than at the present time, for the benefit of the English manufacturers. In referring to other goods which came within the scope of his firm's business he mentioned railway and tramway rails. For some years past most of the rails used in the colony have been coming from the United States and Germany; but now they will come from England, where the prices at present are higher than in the other two countries named. The same remark, he said, applied to lamps and other articles. In referring to certain omissions in the schedule, he said it was obvious that the schedules had been very carefully framed so as to interfere as little as possible with those articles which are imported largely from foreign countries and which are indispensable to the colony. Among these articles are American axes and other

tools and agricultural implements and machinery, in regard to which the United States was better able to meet colonial requirements than English manufacturers were. He especially referred to axes, in which the quality of the American manufactures had always been far ahead of the English axes. Kerosene was another item not included in the schedule, for the apparent reason that its production was almost exclusively confined to America. He further said that this bill would be very detrimental to the direct steam communication between New York and New Zealand.

The manager of one of Auckland's chief mining engineering houses was interviewed regarding the bill. After condemning it on broad principles and referring to the likelihood of retaliatory measures on the part of other countries, he said that, as far as his own firm was concerned, the new bill would be little short of ruinous and would practically bring the business to a standstill. He stated that his firm held agencies for manufacturers of engines, motor cars, etc., in the United States and Great Britain; but, as far as the English firms are concerned, he finds it impossible to get orders completed within the specified time. They have so many orders in hand for their own country that they are not at present in a position to cater to the colonial markets, and, from inquiry made on a recent visit to England, he ascertained that, even should they desire to revive trade with the colonies, the home manufacturers would not be able to cope with it for some years to come. He thought the passing of the bill would mean the exclusion of American-made goods and would force the colony into a market incapable of meeting the demands. Many other firms of similar views could be quoted, but space will not permit of it. Several of the chambers of commerce throughout the colony have held special meetings to discuss the bill, and have passed resolutions expressing regret that no time was allowed for its consideration before its adoption. Before the bill passed an amendment was introduced and adopted to the effect that all printing paper imported by regularly registered newspapers in the colony should be admitted free of duty for a period of three years from the passage of the bill.

I find that in spite of the increased prosperity of the colony and the fairly rapid growth of the population the revenue from taxation has, since the year 1896, increased from \$16.31 per head to \$19.86 per head in 1903. One writer on this subject says:

Not only has this money been spent and no remission of taxation made at a time when the country might well afford to do so, but the net public indebtedness has been increased from £42,225,000 (\$215,054,778) to £53,500,000 (\$260,357,850) during the seven years (of which increase only a small amount represents combines caused by conversions of old loans at a lower rate of interest), and the average amount of debt for every white man, woman, and child in the country is from

\$292.65 to \$320.03. Nor is it pleasing to see to what a ridiculous and irritating extent the passion for interference in the management of private business concerns has been carried in the so-called interests of labor.

During the last decade the imports of New Zealand have progressed as follows:

Year.	Total imports.	From United States.	From all foreign countries.
1893.....	\$34,555,000	\$1,895,000	\$2,685,000
1896.....	35,685,000	2,465,000	3,788,790
1899.....	43,695,000	3,875,000	5,711,625
1902.....	56,635,000	6,594,685	9,415,000

Since the year 1893 the colony's total imports of goods have increased 64 per cent; its imports from the United States alone have increased 248 per cent, and the imports from all foreign countries, including the United States, 232 per cent.

F. DILLINGHAM, *Consul-General*.

AUCKLAND, NEW ZEALAND, *November 20, 1903.*

The following is an extract from a speech delivered recently at Ballarat, Victoria, Australia, by Hon. Alfred Deakin, prime minister of the Commonwealth of Australia, which was forwarded by United States Consul-General J. P. Bray, of Melbourne, Australia, under date of October 30, 1903. It is important and interesting, as it shows how very much the movement toward preferential tariffs has taken hold of the people in Australia:

When we see war waged for bondholders, when we see war threatened in the Far East for markets, is it not desirable that we should engage in combined industrial operations to protect our toilers and wage-earners, our manufacturers and our traders? If the Empire is to be defended, it must be by the defense of all its parts. It can not be by treating it as a simple unit. When we speak of self-development we are told by the foreign traders that it is a selfish Australian policy. The Secretary of State for the Colonies last year met the premiers in conference. He recognized fully, and it was declared by resolution, that free trade within the Empire was impracticable. A protectionist tariff is essential to Australian growth. It was my lot in 1887 to be present at an imperial conference when Mr. Hoffmeyer, of Cape Town, made a most statesmanlike proposal. He proposed that a duty of 2 per cent should be levied by Great Britain and her dominions on all foreign goods. He calculated it would yield \$34,065,500, and he proposed that it should be devoted to purposes of the general defense of the Empire. I supported that proposal and I support it still. There are more modest proposals before us now. They were defined by Mr. Chamberlain with characteristic courage and resource. He proposed a duty of 2s. (48 cents) per quarter on all foreign wheat, 5 per cent on foreign meat and dairy products, excepting bacon, and a substantial preference on colonial wines and fruit. What does he expect in return? He expects that the British dominions shall grant a preference to Great Britain. I believe we are prepared to

do so. He asks to be authorized by the electors of Great Britain to make these proposals to us. He will make, then, a specific proposition as to the articles of British manufacture on which he will expect a preference. When these proposals are made they will receive a most cordial and generous consideration at the hands of the Australian government.

The importations of wheat at present into Great Britain amount to 170,000,000 bushels per year. Of that quantity 57,000,000 bushels come from within the Empire. In Canada, South Africa, and Australia there are granaries to supply the whole of that 170,000,000 bushels. Australia sends now 32 per cent of her 57,000,000-bushel crop. If Australia increased her export and sent 32 per cent of the whole British consumption, we would require to send 38,000,000 bushels more than the largest crop we have ever harvested. To produce these 38,000,000 bushels of wheat would employ thousands of farmers on millions of acres, and would improve our husbandry and give us a magnificent trade with the mother country. Our full share of the butter industry, calculated in the same manner, would be almost as valuable again as that of wheat. The two together would mean an enormous increase in the population, agricultural settlement, and wealth. What are we asked for in return, even if we are asked for anything? In 1891 our imports from Great Britain were \$128,733,524 and in 1901 they were \$122,815,860, a decrease of nearly \$6,085,125. For the same year our imports from British colonies were \$21,067,078, and in 1901 they had increased by \$2,189,925. Our imports from foreign countries in 1891 were \$29,330,395 and in 1901 \$60,402,998—that is, they had nearly doubled their exports in ten years. It might be perfectly true that the whole of these £12,000,000 could not be obtained from the United Kingdom, but it must be very little that the British Empire somewhere could not supply. When we know the specific matters upon which we are asked to grant preferential trade we should be prepared to deal with them in a generous spirit.

I have been asked whether, when Mr. Chamberlain makes specific proposals, the Commonwealth government will be prepared to consider reductions as well as increases. I say certainly we will. We shall be prepared to take them, item by item, and consider the circumstances of each industry. We shall be prepared to make reductions or increases, as the case may require. The misfortune is that we have not the protection tariff we would like and it scarcely admits of reduction. The ad valorem rate in Russia is 132 per cent; in the United States, 72 per cent; France, 30 per cent; Germany, 25 per cent; Canada, 16 per cent; New Zealand, 9 per cent; Australia, 7 per cent; and South Africa, 6 per cent. Only one country has a lower ad valorem rate than Australia. Canada has the opportunity for reductions; our opportunities are not so great. But we shall gladly take advantage of them, and where we can not grant reductions we shall increase the duties against the foreigner. We shall deal with preferential trade as we have dealt with other subjects of a similar nature—in a liberal spirit. It would turn the tide of population now flowing into Canada and the United States. We will welcome that population, and by means of preferential trade we will be able to offer the means of livelihood and prosperity for all who come for them. In 1887 we were waiting for the mother country. The mother country has now arisen and we are hastening to her side. The time is ripe for the development of national trade. It will be no easy task to achieve that object. In Australia we do not know that the tariff we have gained is safe, although the crucial issue of the elections. An attempt is being made in other States to overshadow it. Appeals are being made to every clan that may be affected to cast their votes for everything but the real issue at stake. The misfortune is that we have a plethora of protectionist candidates. They must have the patriotism at the present juncture to stand back. There must not be more than one protectionist, one national candidate, in each electorate.

This clashing must cease. We are threatened with a multiplicity of candidates without and within the State. Feeling is being worked up against us. Victoria must send in even a more solid phalanx than last time; and I am speaking to-night not only to Victoria, but to the whole of Australia. It is above all things desirable that the electors should realize what is the root and center of the position. The root and center is the maintenance of the tariff as we have it. We want fiscal peace, the maintenance of the prosperity we have, and the enjoyment of preferential trade—the opening up of closer relationship with South Africa and other parts of the Empire for the benefit of ourselves and our kinsmen. In the last ten years we have realized how much there was for the Commonwealth to do. The interests of Australia are our own interests, and I believe that the electors of Australia will recollect what I hope will come to be the Ballarat battle cry, "Fiscal peace and preferential trade for a 'white Australia.'"

WORLD'S COTTON SUPPLY.*

(From United States Consul Monaghan, Chemnitz, Germany.)

The past year has seen a most significant advance in the development of colonial cotton culture. This movement of the introduction of cotton growing into the expansive tropical colonies of the world, should it continue—and there is no reason why it should not—is destined to exercise a profound effect upon the cotton-growing industry of the United States. Colonial cotton culture is at present being promoted by all European countries with such activity and on the basis of such thorough and scientific methods that much may be expected therefrom. In England the central moving power in this direction is the British Cotton Growing Association; in Germany, activity centers mainly about the Kolonial Wirtschaftliche Komitee, of Berlin; and in France the lately organized Colonial Cotton Association has taken the project in charge.

The aim in this movement is to secure the independence of Europe from the American cotton and cotton speculators. The European cotton spinning and weaving industries have been repeatedly more or less injured through their absolute dependence upon American cotton. For this reason sentiment is strongly in favor of an independent colonial cotton supply, and the day on which it is accomplished, if ever it can be accomplished, will undoubtedly be hailed pretty much like a liberation from bondage.

The recent history of cotton prices well demonstrates the instability of quotations, the extreme sensibility of the market, and the disastrous fluctuations from week to week—at times, even from day to day. Wild zigzag figures represent the movement of the market. Just as the accidental discharge of a toy pistol may create

*Extract from the annual report of Consul Monaghan, which will be printed in full in *Commercial Relations* for 1903.

a panic and a mob, so purely accidental occurrences upon the cotton market will send prices jumping up or down. Rumor may have it that New York is approaching financial difficulties, and straightway cotton goes down. Someone may circulate a "suspicion" that the estimated supply at Galveston may upon revision prove 40,000 or 60,000 bales short, and straightway the market strengthens. The rise and fall of the Mississippi makes the European cotton market a victim of the caprice of nature and a plaything of the waves. From England, Germany, everywhere, come reports of the wild, vexatious jumpings of cotton prices. That such sensitiveness and uncontrollable turbulence is fraught with disastrous results for the European cotton manufacturer requires no demonstration.

Moreover, certain forces have been operating during the course of recent years to increase the dependence of Europe upon the cotton crop of the United States. This has more strongly than ever impressed upon the transoceanic cotton manufacturer the value and necessity of an independent cotton supply, which to-day is finding its expression in a general and concerted move in favor of the development of colonial cotton culture. The cotton supply of Europe has been decreasing. The United States and India have been consuming increasing quantities of their own crops, while the discovery of the process of mercerization has taxed the supply of Egyptian cotton for this industry and has withdrawn it to this extent from the ordinary cotton-manufacturing industry. The gap had to be filled, as far as possible, from the United States; and it would appear that unless Europe can open up a new source of supply she must ever become more dependent upon the American cotton crop. In view of the fact that the United States is consuming a rapidly increasing share of her own crop, the European cotton-manufacturing industry would be placed in a rather peculiar situation in case the attempt at colonial cotton culture should fail in its expectations.

J. F. MONAGHAN, *Consul*.

CHEMNITZ, GERMANY, *October 8, 1903.*

COTTON IMPORTS INTO THE UNITED KINGDOM.

(*From United States Consul-General Evans, London, England.*)

I transmit herewith a statement showing the quantities of cotton imported into the United Kingdom during the years 1888, 1893, 1898, and 1902, and the principal sources of supply.

Much interest is being manifested and much effort directed toward the encouragement of the growing of cotton in British India and British West Africa, for the purpose of insuring a supply from those

countries to meet, at least in part, the demands of the British industry and trade.

Imports of cotton into the United Kingdom.

Whence imported.	1888.	1893.	1898.	1902.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
United States.....	1,348,571,840	1,055,855,360	1,806,353,424	1,363,839,232
Egypt	147,191,184	220,465,280	275,929,584	354,894,064
British India.....	170,238,768	62,461,504	27,349,728	33,057,808
British West Indies.....	516,544	597,408	320,820	419,664
All other countries.....	65,236,752	76,400,512	18,494,796	64,527,120
Total imports.....	1,731,755,088	1,415,780,064	2,128,448,352	1,816,737,888
Reexports	232,903,888	224,621,488	213,072,464	275,173,056
Net imports for consumption...	1,498,851,200	1,191,158,576	1,915,375,888	1,541,564,832

H. CLAY EVANS,
Consul-General.

LONDON, ENGLAND, *December 9, 1903.*

REVOLT AGAINST AMERICAN COTTON.

(From United States Consul-General Mason, Berlin, Germany.)

Foremost among the economic movements in Europe, which may have a serious meaning for important interests in America, is the present simultaneous effort of Great Britain, France, and Germany to emancipate their textile industries from dependence upon American cotton. The causes of this movement, which has been gathering force and inspiration for several years, are obvious to anyone familiar with the cotton trade and have been brought into especial prominence by the events of the past season. This will be apparent from a brief résumé of the present situation.

Germany imported in 1902 348,302 metric tons of raw cotton, of which 267,000 tons, or 76 per cent, valued at \$76,488,600, came from the United States. The total imports from January 1 to October 31, 1903, were 306,427 tons, of which 205,101 tons, or 67 per cent, was of American origin. Add to this the importations of cotton waste and of weaving yarns from Great Britain, Switzerland, and Belgium that are spun in those countries from American fiber and it will be apparent that the cotton-textile industries of this country are practically dependent upon American cotton, which ranks first in value and importance among all German imports from the United States. The same relative dependence upon American fiber is more or less true of the cotton industries of Great Britain, France, Switzerland, and the Netherlands.

The portentous feature of the situation is that there is, not only

in Germany but throughout Europe, a growing feeling of resentment against this dependence and a determination that their spinning and weaving industries must at any cost be emancipated from such vassalage by the development of wholly new sources of supply. In England this movement has inspired the organization of the British Cotton-Growing Association, which after two years of more or less successful experiments in Sierre Leone has within the past few days received from the Province of Lagos, West Africa, a sample shipment of 30 tons from this season's crop, which is pronounced equal to the best American Upland in both length and quality of fiber.

France has likewise a colonial cotton association, which is experimenting in the Sudan with such success that the samples received from there are reported as having reached approximately the grade of Egyptian cotton, and are therefore adapted to the mercerizing process, which has of recent years consumed a large and growing percentage of the Egyptian staple.

But it is the German campaign for a colonial cotton supply that is at present most vigorous and interesting. For this activity there are three obvious and controlling reasons. The first of these is the fact that the German colonies in Africa have been hitherto economically disappointing, and there is a natural desire on the part of the Government and of the more influential classes that those possessions may be utilized and their acquisition justified by making them the means of securing a permanent future supply of cotton from a source under the German control. The second and, for the moment, quite the most potent reason grows out of the uncertainty and the violent, sudden, and extreme fluctuations of the American cotton market during the past three months. It is charged in the German press that the American cotton market is at the mercy of groups and combinations of conscienceless speculators, who by their manipulations drive prices up and down to suit their own purposes; that the Government reports as to size and quality of crop are often contradictory, untrustworthy, and misleading; that in consequence of these irregularities in supply and price German manufacturers have sustained serious losses as well as frequent interruptions and uncertainties in their business. The third, and by no means the least urgent of these causes, is the constant growth and expansion of American cotton manufactures, particularly in the South, which consume a steadily increasing percentage of the total crop, leaving a constantly narrowing surplus for export to the noncotton-growing countries of Europe. All these facts are made the most of by the party which advocates a vigorous pull all together for the development of cotton fields in East Africa that shall forever emancipate

the spinners and weavers of the Fatherland from depending upon the American staple.

Thus far the movement is, of course, in its infancy, but its future may be ominous for the cotton growers of our Southern States. It is, in the first place, perfectly organized and ably managed, under the auspices of the colonial agricultural committee, which has its seat in Berlin and is in close touch with the Colonial Ministry. Its experiments in the East African colonies have been in progress two years and appear from the reports to have been entirely successful. A few bales of the new staple, which arrived a fortnight ago, have been examined and tested by the Cotton Spinners' Union in Saxony with highly encouraging results. In the exultation of the moment it is announced that there are many thousand square miles of land in East Africa with soil and climate perfectly adapted to the cultivation of cotton equal or even superior in quality to the American staple.

It is realized, however, that it will require far more than merely fertile soil and genial climate to make African cotton growing on a large scale permanent and profitable. Time, capital, improved methods, and cheap; tractable labor are the other essential elements in the problem. Capital is ready as soon as the requisite skill and experience can be provided, and in respect to this last requirement the German Colonial Society has begun with characteristic deliberation and thoroughness.

Through the German consul at Galveston arrangements are in progress to send over and educate at agricultural schools and on plantations in Texas a number of young Germans, who before going will sign contracts to spend a given number of years as superintendents of plantations in the German African colonies. A German American from Texas, named Becker, has already been sent out to Dar-Es-Salam to examine the cotton grown experimentally there and then travel over the country to explore and estimate the area of land in the colony that is adapted to that branch of agriculture. Cooly labor from China will be employed in case the native tribes prove too incompetent, and the question of transportation will be readily solved by the same industrious and venturesome steamship lines that now carry the trade of the German Empire to every corner of the globe.

It may be many years before this European crusade for colonial cotton will accomplish all that it seeks to achieve, but whether we like it or not the day will come, sooner or later, when the cotton of our Southern uplands and valleys will no longer be king beyond the frontiers of the United States.

FRANK H. MASON,
Consul-General.

BERLIN, GERMANY, *December 10, 1903.*

AUTOMOBILES VS. RAILWAYS AND CARRIAGES.*(From United States Consul Ridgely, Nantes, France.)*

The question as to the harm likely to be worked to carriage builders and to the passenger business of railroads by the progress and evolution of the automobile industry has recently given rise to serious newspaper articles on the subject in the United States and elsewhere, and it has been held that the two industries must of necessity suffer materially from automobilism. France is the great world center of automobile construction and exploitation, and, having invented and developed the industry, has had and is having very much more experience with it than any other country. For this reason it is clear that the opinions of those in France in a position to know would be valuable and practicable in determining the question. With the idea therefore of getting the facts, I recently addressed a circular letter to the Carriage Builders' Exchange at Paris, as well as to the editors of the Carriage Builders' Journal (*Le Journal de la Carrosserie Française*) and the Carriage Makers' Guide (*Le Guide du Carrossier*), and also to the traffic managers of three of the great railway systems of France. Their answers follow, and it seems to me that they should be of interest and value to the carriage builders in the United States, as well as to the railroads:

TRANSLATION OF EDITORIAL IN THE CARRIAGE GUIDE.

The consul of the United States at Nantes has addressed us some very salient questions as to the development of the automobile industry. He asks us:

"1. Has the progress of the industry resulted in any considerable loss to the carriage builder?

"2. Do the carriage builders find a compensation for this loss in the extra work of constructing and trimming automobile bodies for the automobile manufacturers?

"3. Have there not sprung into existence certain establishments devoted exclusively to the construction and trimming of automobile bodies, and have these establishments not worked harm to the regular carriage builders?

"4. What are the comparative statistics of the last several years as to automobile construction and carriage building?"

It is indisputable that the progress of automobilism has recently created a profound disturbance in the carriage-building trade and that the latter has suffered from the newly developed taste for mechanical locomotion, but up to this time the statistics show nothing definite, since the majority of those who own horses and vehicles, in possessing themselves of automobiles, have not got rid of their other vehicles. It is true, if we consult the license list of swung vehicles taxable as "voitures de luxe," we find in Paris 9,613 were constructed in 1902, as against 10,632 in 1901 and 10,926 in 1900. As to two-wheel swung vehicles, 1,922 were constructed in 1902, as against 2,116 in 1901. It is thus evident that in the city of Paris the construction of "voitures de luxe" (first-class swung vehicles) has diminished in proportion as the construction of automobiles has increased, and that the

carriage-building industry has suffered in due ratio. It should not be forgotten, however, that the rapid extension of street-railway lines and the installation of the underground electric road have also worked against the carriage builders, and that their losses may not be solely chargeable to automobilism. So much for Paris.

Let us now look at the whole of France. The tax list shows that 380,094 new voitures de luxe were declared in 1901, against 378,607 in 1902. On the other hand, in 1902 the number of swung two-wheel vehicles increased from 1,196,460 in 1900 to 1,222,186 in 1902. Hence, in making a résumé of the whole, including two-wheel vehicles, we find 1,600,793 in 1902 as against 1,575,554 in 1900.

From all this we draw the deduction that the automobile, in spite of its rapid development, has not done the carriage builders any harm outside of Paris.

To the consul's second question, we may also answer in figures without drawing the distinction between the regular carriage builders and the specialists who construct only automobile bodies.

In France in 1902 there were 9,207 automobiles. Everybody knows that the most of them were built in Paris. It is equally well known that the bodies and trimmings were nearly all constructed by the carriage builders of Paris. During the year 1901 automobiles to the value of 15,800,000 francs (\$3,049,400) were exported from France. Of this total value, the bodies and trimmings of the automobiles represented about one-third, or 3,266,666 francs (\$630,467), which is about the usual annual declared value of swung vehicles exported from France. Hence, we must agree that in constructing bodies and trimmings for automobiles the carriage builders, in so far as the value of the work is concerned, actually doubled their own exports in 1901. In 1902 France sold abroad automobiles to the value of 30,000,000 francs (\$5,790,000). Many of these, however, were naked machines—without bodies or trimmings—and we must consider that in the whole the work of the carriage builders and trimmers represented only about one-sixth, or 5,000,000 francs (\$965,000). None the less the Paris trade profited to that extent. At present it may be remarked, in passing, that the Paris automobile constructors in building machines for their provincial agencies are displaying a growing tendency in the direction of sending the naked machines to their agencies and having the bodies and trimmings constructed by the local carriage builders. Thus, again, does the carriage-building trade profit from the automobile industry.

The consul asks us if there are many first-class establishments exclusively engaged in the construction and trimming of automobile bodies? In answer to this question it may be stated that upon the first general appearance of automobiles in practical use, after the Paris universal exposition of 1889, the carriage builders showed themselves uncompromisingly opposed to mechanical locomotion and did all in their power to retard the new industry. As a matter of fact they had no confidence in its future and did not take it seriously. The result was that automobile constructors found it necessary at the outset to address themselves to the small and unknown carriage builders, who could only do the work clumsily. Seeing the growth of the industry and the demand for fine work, some of the foremen of the large carriage factories left their places to establish themselves as exclusive constructors of automobile bodies and trimmings. They have succeeded beyond their expectations, and to-day there are several of these establishments at Paris, employing about 800 skilled workmen, with perfected tools and machinery. They construct solely under contract for automobile manufacturers and at prices which the high-class carriage builders can not meet. But in spite of their higher prices all the fashionable and rich possessors of automobiles insist upon having the carrosserie (bodies and trimmings) constructed by the more fashionable carriage builders. Thus there seems to be work for everybody, and to-day the high-class carriage builders, having finally recognized the new industry as a permanent and

growing trade, are as well prepared to construct electrical, petroleum, or steam carriages as the coupés, phaetons, and landaus of other days. Nor need it be said that their good taste is finally bringing to automobile carrosserie the æsthetic elegance and comfort which it lacked at the outset. Thus, it may be said in conclusion that if French mechanics have so perfected the automobile in its mechanical features as to be able to defy all foreign competition for years to come, the carriage builders of Paris, with their irreproachable taste and skill in designing and constructing the carrosserie, will aid largely in maintaining France's position at the head of the automobilism of the whole world.

The following letter is from L. Lagard, the editor of *La Carrosserie Française* (Carriage Makers' Journal):

PARIS, *September 14, 1903.*

MONSIEUR LE CONSUL: In answer to yours of the 29th of August I have to say:

1. The automobile has done considerable harm to the carriage-making industry, meaning thereby carriages of the higher grade.
2. The carriage builders have regained a little by constructing automobile bodies, but this has more or less demoralized their shops because of their workmen being unfamiliar with this class of work.
3. Up to this moment there exists no carriage manufactory solely devoted to the construction of automobile bodies.

In short, the carriage builders have lost a great deal by the automobile industry, while the automobile constructors, on the other hand, have made big money and will continue to do so.

M. A. Bonet, president of the Western Railroads of France, writes as follows:

PARIS, *September 10, 1903.*

MONSIEUR LE CONSUL: In your letter of August 29 you ask us if the growing use of automobiles in France has resulted in any considerable loss to the passenger traffic of the Western Railway system.

In answer, I have the honor to tell you that up to date we have found nothing to fear in the competition of automobiles. The uses to which they are put are quite different to those served by the railroads.

The following interesting letter was received from the vice-president of the Paris, Lyons, and Mediterranean Railroad, the most extensive railway system in France:

PARIS, *September 19, 1903.*

DEAR SIR: In your esteemed letter of the 29th of August you ask me whether or not the growing use of automobiles in France has resulted in any loss to the passenger business of the French railways.

In view of our very large system with its multiplicity of branches and the variety of causes which influence travel it is not possible for me to say exactly what the effect of automobilism has been upon our passenger business up to the present moment, but our impression is that the railways should see in the great progress of this new industry something to welcome. Not only has it brought us business in the transportation of the automobiles themselves, but it has increased rather than diminished the number of passengers over the lines of our company. As a matter of fact, every new invention in the way of locomotion only serves to develop a taste for travel. This was one result of the development of bicycling, which, while it served to take people easily out of towns and cities, generally gave the railways business in bringing them back. If occasional voyages are now

made in automobiles which were formerly made in railway trains, it is none the less certain that crowds of people who formerly stayed at home now move about considerably in automobiles, and the railroads profit for the reason that some part of this moving about, whether because of accident, fatigue, or bad weather, is almost invariably accomplished in the trains. In short, we regard the automobile rather as an auxiliary than a competitor.

M. A. Mayer, general traffic manager of the Paris and Orleans system, answered as follows:

PARIS, *September 5, 1903.*

MONSIEUR LE CONSUL: It affords me pleasure to answer your letter of the 29th of August and to say that we have not yet discovered on our system any decrease of receipts arising from the competition of automobiles as a means of popular locomotion. On the other hand, it seems to us that this new industry is developing a taste for travel which has indirectly resulted in benefit to the railways, since by the misadventures of the sport it frequently furnishes them with passengers who would otherwise have stayed at home. Moreover, we haul the raw materials from which automobiles are made and frequently the finished article itself.

American carriage builders may see in the above the advantage of establishing separate shops for the exclusive construction and trimming of automobile bodies, and the railroads may also see the advantage of making the transportation of automobiles easy and safe.

BENJ. H. RIDGELY, *Consul.*

NANTES, FRANCE, *October 21, 1903.*

MOTOR ROADS OF THE FUTURE.

(From United States Consul Halstead, Birmingham, England.)

In a recent number of the Car Magazine, edited by Hon. John Scot Montague, M. P., there is an interesting presentation by Comys Beaumont of the commercial possibilities in the building of special tracks or motor ways. Mr. Beaumont maintains that this full exploitation of mechanical traction would show financial results sufficient to convince the most energetic opponent to automobilism that it is a force destined to have far-reaching results. He proposes for England a number of car ways covering the entire country.

Motor roads would be expensive to build, but the outlay, he claims, required by the most extravagant methods of building would not amount to a fraction of what a railway costs to lay, leaving the rolling stock out of the question altogether, because not only would such roads be infinitely cheaper to build per mile than railroads, but since termini and near approaches to towns or cities are rendered unnecessary there is no need to expend vast sums in purchasing property in the heart of valuable districts, which is always a vast capital outlay necessary in railway construction.

A motor car can leave the road at either terminus and take ordinary roads leading to any point in a city or its suburbs, and at

almost any point along the way a car can, of course, turn off and travel on the regular highways. The main object of a car way being to take absolutely the shortest and most direct route between two given points, no deviation whatever is made to include some town of importance. A railroad track laid on this principle would be manifestly absurd, but in a car way it matters little. A car bound from London to Coventry would leave the way at the most convenient junction for the latter city (2 or 3 miles, more or less, not signifying), while if the route were to twist and contort itself to include all important areas it would lose its effectiveness; for to enable the motor car to prove its superiority (convenience and speed united), it requires every assistance toward the consummation of both, which is exactly what the function of a perfectly straight car way will be to provide.

Mr. Beaumont claims the laying of such ways is not only practical, but should prove an excellent and paying investment if adequately capitalized. Nor is the capital required so great as might be supposed. He proposes a breadth of 25 feet, to permit of four cars abreast, leaving plenty of room between them, and he is not willing to accept the proposals made by other people, who have argued that a cycle track be laid alongside.

An important question is that of paving, and there are four systems which may be considered, viz, wood, brick, asphaltic macadam, and concrete.

MARSHAL HALSTEAD, *Consul.*

BIRMINGHAM, ENGLAND, *November 3, 1903.*

SHOULD STREET CARS OUTSPEED AUTOMOBILES?

(From United States Consul Halstead, Birmingham, England.)

As the result of proceedings taken by Mr. R. Moffat Ford, a well-known automobilist and manufacturer, four drivers of electric street cars on the outskirts of London were fined 40s. (\$9.72) each, with court costs, for exceeding their legal speed limit of 10 miles an hour. "Any legal authority," Mr. Ford writes the London Times, "is now empowered to proclaim that in the district under his control the highest speed at which a motor car is to be driven is 10 miles an hour, or just about half as fast again as an athlete can walk." It seemed to Mr. Ford that if he could show the local authorities in some practical fashion "the absurdity of such a speed limit, they might hesitate to exercise the power put into their hands," and that if he could compel the electric street-car riders to leave home a

quarter of an hour earlier in the morning and have them arrive home a quarter of an hour later in the evening because the street cars were compelled to travel within the speed limit provided for them—the utmost speed at which electric tram cars are permitted to travel in this country is 12 miles an hour—they might communicate the results of their observations to their representatives in powerful places.

His point is that “if the man in the street, and through him the county councilors, magistrate, and legislators, permits tram cars to run at 20 miles he should in common sense allow motor cars to travel at 30 miles an hour and, conversely, if he restricts motor cars to 10 miles an hour he should insist that tram cars should not travel over 7 miles.” Mr. Ford’s argument in favor of the motor car is that, weighing only 18 cwts. and provided with at least two sets of brakes, it can not only stop quickly in much shorter space than an electric car, but can steer clear of danger, while an electric street car weighs 14 tons and has only one way of avoiding danger—that is, by using its brakes. “Supposing each vehicle to be driven by a driver of average intelligence,” he asks, “upon which vehicle would it be sensible to impose the more stringent speed regulations? And yet for several years past motor cars have been unceasingly harassed in the manner I have described, while tram cars have been permitted by the authorities to travel at double their legal rate with impunity.”

MARSHAL HALSTEAD, *Consul*.

BIRMINGHAM, ENGLAND, *November 18, 1903.*

A WALKING LOCOMOTIVE.*

(*From United States Consul Boyle, Liverpool, England.*)

For some years past Liverpool has been to the forefront in scientific study and practical experiments of means of road haulage of freight. Contests of motor wagons are held here yearly under the auspices of the Self-Propelled Traffic Association, of which the Earl of Derby is the president. The amount of heavy haulage in Liverpool from the ships and docks to local warehouses and railway stations is probably greater than in any other city in the world, and is a serious item in the cost of goods. Then railroad freight charges in England are enormous—from two to six times as much as in the United States. Consequently, there is always great interest in this city in any invention or system which promises to reduce the cost of haulage.

* The illustrations are from cinematographs of the “pedrail” in actual motion.

Professor Hele-Shaw, of the engineering department of the Liverpool University, is admittedly one of the greatest living authorities on mechanical locomotion; therefore his unequivocal and enthusiastic indorsement of a new invention called the "pedrail" has attracted wide and respectful attention in England, not only among the general public, but among scientific engineers. Professor Hele-Shaw recently gave an address before the Liverpool Self-Propelled Traffic Association on the pedrail, illustrated by models, drawings, and cinematograph pictures. Had the door spaces in the university lecture hall been wide enough and the floors strong enough, the professor would have had a pedrail for actual demonstration. He asserts that it was quite possible for it to have climbed up the steps and walked into the hall.

The pedrail is variously described as a "walking locomotive," a "half traction engine and half walking machine," a "combination of an endless railway and a trotting machine," and a "rail moving on wheels." The Automotor Journal, of London, describes it as "a traction engine which actually and literally walks upstairs with the stride and sure-footedness of an elephant and hauls loads behind it under circumstances which would nonplus an ordinary traction engine. Ruts, curbstones, and bowlders it makes nothing of, and even 9-inch balks of timber are stubble before it." The inventor is Mr. Bramah Joseph Diplock, of London. Professor Hele-Shaw says that he had some years since conceived the idea of a locomotive with rails moving on wheels. He encountered difficulties which to him seemed insuperable, but these difficulties, he asserts, Mr. Diplock has surmounted. The professor declares that the pedrail is "a revolution in mechanical locomotion." The pedrail, it is claimed, can be used with advantage not only for ordinary freight haulage on common roads, but is thoroughly practicable as a traction engine over bad roads, and even in districts where there are no roads at all and where progress by the ordinary traction engine would be absolutely impossible. It would, for instance, as claimed, be suitable for hauling minerals from newly developed mines and heavy lumber from partly cleared forests, and would successfully meet the rough emergencies of military operations.

While Professor Hele-Shaw is convinced, after an intimate and close study of road locomotion and the properties of the wheel for many years, that no contrivance can take the place of the wheel and the pneumatic tire in circumstances where the road service is good and the conditions suitable, he is also convinced that the wheel itself has reached its utmost limits of carrying power, both in regard to weight and speed upon the ordinary roads, however well the roads may be constructed or however perfectly the wheel may be made.

Professor Hele-Shaw argues that many great inventions are imitations of the working of nature itself. He instances the screw propeller as being an exact reproduction of the action of the fish in swimming; but because the motive power of the propeller has to be of a rotary nature the continuous revolution of the screw is substituted for the intermittent action of the fish's tail. Screw propulsion, the professor adds, may be said to have solved the great problem of ocean navigation.

Professor Hele-Shaw submits this question: Is there in use a means of locomotion on land imitating successfully the marvelous natural process of animal locomotion, but modified to suit the mechanical requirements of the case? The wheel, he says, falls hopelessly short of the mechanical action of an animal's foot. The animal does not turn upon its foot; the turning takes place upon the ankle, which, being flexible and having a ball-and-socket joint perfectly lubricated, affords the very minimum of resistance. The foot is placed upon the ground and kept there, thus insuring the minimum of rubbing action with the surface; whereas the wheel is only adapted to turn on the surface of the ground itself. Second, while the wheel when it strikes an obstacle meets with bodily resistance, the foot can be brought down upon an obstacle and the body elevated over it gradually with the least possible amount of shock. These considerations have naturally suggested the invention of walking machines. They have all been failures, and principally so because they have not combined satisfactorily the adapting of the movement of an animal—which is intermittent—with the continuous movement afforded by the properties of the wheel. In the belief of Professor Hele-Shaw the solution of the problem is the pedrail, which is described by him as follows:

The pedrail indicates by its name that it is a rail carried upon feet, and the principle of its action may be explained in a few words. It is simply this: Instead of having a permanent rail carried for the whole of its length on permanent feet, viz, sleepers, and wheels running upon this rail, the process is inverted. The feet are (as in the case of the railway) placed upon the ground, but instead of the rails being carried upon the feet, these feet support wheels, and the wheels thus supported act as bearers for a short length of rail attached to the moving carriage.

The fundamental idea itself is not a new one. You may see in many timber yards that the logs are moved about by being pushed over supports which carry wheels, and by shifting these supports from place to place the heaviest logs of timber can be rolled upon the wheels to any required part of the yard. The pedrail invention, however, does more than this. The feet and wheels which they support are attached to the moving carriage itself, so that by an automatic process the feet are carried round after the rail is moved over them and placed again in front of the machine, thus affording a continuous track of wheels upon which the supporting rails can be carried in any direction in which the vehicle is steered. * * *

Briefly, the invention might be described as replacing the wheels of an ordinary traction engine by revolving frames carrying sliding spokes, each spoke having at

its end a circular foot, and on the spoke itself, at a little distance above the foot, a small wheel or roller. In connection with each series of revolving spokes a fixed frame is attached to the side of the traction engine. This fixed frame somewhat resembles in form an inverted heart. When the axles revolve the spokes are carried round and in turn place the feet upon the ground. At the same time the wheels, which run round in contact with the heart-shaped frame, when brought underneath it—that is, under what may be described as the broader portion of the heart—act in turn as supports for the heart-shaped frame to glide over. Hence the engine is itself supported in turn through the wheels by the spokes which happen at the time to be resting with their feet upon the ground.

The pedrail consists of two main parts, one of which is a railway which is fastened to the axle box and does not revolve, and the other part is a kind of circular box carrying sliding spokes, rollers, and feet in such a manner that the rollers and feet are placed in succession on the ground, and the rail runs over them.

It has attached to it a 4-ton crane, so that it can lift and carry heavy goods, minerals, or agricultural produce. * * *

This engine I have myself tested at Stoke-on-Trent under the most trying conditions. I took it up the steepest hill—practically a mountain—which I could find in the neighborhood, threw down large stones in its path, over which the feet simply set themselves at an angle and did not crush them, though the wheels of a heavy traction engine immediately crushed and distorted the road surface. I made this machine walk over 3-inch, then 6-inch, and finally a 9-inch balk of timber thrown down in its path, and I could scarcely believe that the whole structure was not permanently distorted and damaged, whereas it was well within the limits of play allowed by the mechanism.

Finally, it walked up the lane to the works in the softest ground, where there were ruts of 8 and 10 inches deep, with the greatest ease.

On another occasion, in a trial at Lincoln, owing to the unskillful handling of the man at the wheel, the engine got into a position in which I thought it must infallibly overturn in the soft bank into which it had fallen, and while I was discussing how it should best be got out, the application of steam by the driver caused it to walk out of its difficulties in a way which I can only describe as like that of a cat. * * *

The action of the pedrail on the road is very remarkable. Whereas the ordinary traction engines destroy roads to such an extent that they have been forbidden in many parts of this country and also in various parts of the world, and heavy motor wagons and traction engines have been severely taxed by local authorities and made to contribute to the repair of the roads, the pedrail positively improves the road over which it walks. This has been proved by actual experiment, and it is more than probable, from the remarks of an eminent municipal engineer, that the pedrail is destined to entirely replace the road roller for repairing roads, as the action of stamping or ramming is much better than rolling for this purpose.

The numerous articles now current in the English press descriptive of Mr. Diplock's pedrail assume that the mechanical principles of the engine are entirely new. But while it probably must be conceded to Mr. Diplock that the idea was original with him and that he is to be credited with the honor of this remarkable invention, yet it appears to be the fact that (as so often happens) he had a forerunner. A correspondent of the *Liverpool Courier* on December 5 says that the pedrail reminds him of "Boydell's traction engine," which between 1855 and 1857 was exhibited at a meeting of the Royal

NO. 2 ENGINE MOUNTED ON FOUR PEDRAILS.

Agricultural Society of England. The correspondent thus describes Boydell's engine:

This machine had flat feet attached with a loose joint to the periphery of each of the four road wheels and was a veritable walking monster, and could travel steadily over hedges and ditches, or surmount blocks of timber or other obstacles in its way. It was severely tested at Woolwich and was quite successful, but the

SIDE VIEW OF PEDRAIL MOUNTING STEPS.

strong prejudice of the day against traction engines and the existing laws against the use of road locomotives prevented its being adopted. On the death of Mr. Boydell the following year it seems to have been consigned to the limbo of forgotten inventions.

It is claimed that the pedrail can, by certain modifications, be attached to any ordinary traction engine.

JAMES BOYLE, *Consul*.

LIVERPOOL, ENGLAND, *December 11, 1903.*

SIDE VIEW OF PEDRAIL, SHOWING RAILWAY.

PEDRAIL ENGINE TURNING A CORNER OVER AN OBSTACLE.

PEDRAIL TRANSPORTING GOODS.

PEDRAIL LOADING A RAILWAY TRUCK.

PEDRAIL MOUNTING AN OBSTACLE.

PEDRAIL HALF OVER.

UP! (ILLUSTRATES THE OSCILLATING MOVEMENTS OF THE AXLES.)

STEPPING OFF. (NOTE THE INCREASED LENGTH OF LEG.)

ELECTRIC RAPID TRANSIT.

(From United States Consul-General Guenther, Frankfort, Germany.)

The speed experiments which have been made over the military railroad between Berlin and Zossen with electric cars, and which have attracted attention everywhere, were completed November 21.

Both cars, which had been equipped with apparatus for measuring the resistance of the pressure of the atmosphere, repeatedly made the trip over the whole distance of the railroad between Marienfeld and Zossen, a length of 14.5 miles, at a speed of from 118.75 to 126.25 miles per hour.

It was again evident that the roadbed, with its rails of only 90.2 pounds, was heavy enough, even for the highest speed attained, and was found to be in faultless condition, although it must be borne in mind that the utmost care had always been taken thereof.

Privy Councilor Dr. Zimmermann predicted, on the strength of his calculations, that it would not be necessary to use the so-called "Goliath" rails, of considerably larger weight, for great speed, provided the track is as straight and well ballasted as required. The opinion of the rail manufacturers and also of many technical railroad engineers, who insisted upon the heaviest rails, has therefore been proved faulty.

The results achieved through Dr. Zimmermann are also of the greatest importance, as it will not do now to abstain from a greater speed than heretofore on the ground that the expenses of very heavy rails and a corresponding roadbed would be too great, although it is not denied that the cost of the care of the roadbed would be increased.

The apprehension also that on account of the air pressure the gauge of the track would have to be increased considerably has not been realized. All the important results of these speed experiments will be of benefit to other countries also and are a triumph of German science and perseverance. Next week some special experiments will be made with the big motors and during the winter a memorial will be issued with reference to the results achieved. German papers point with great satisfaction to the fact that the Prussian Minister of Railroads, Mr. Budde, has already utilized the results of these rapid-transit experiments in the management of the Prussian railroads.

In about two weeks trial trips will be made daily for two hours over the part of the military road where the electric experiments were made, but the power will be steam, in order to accomplish

greater speed with suitably constructed material by the old steam locomotives. The construction of the required apparatus for measuring speed is almost completed. A speed of about 80 miles per hour is viewed differently now from that with which it was formerly viewed, and it is quite certain that these trials will have practical results also for steam power, and that the traveling public will derive financial benefit as well as a saving of time.

The experiments with the "hot-steam" (heiss-dampf) locomotive and with the new car trucks will result in valuable technical and economic comparisons.

At the same time, trials with electric starting for medium speed of more than 100 kilometers (62.5 miles) per hour will be continued on other State railroad lines.

The highest speed attained in these electric trials was 210.2 kilometers (130.5 miles). The opinion is freely expressed in railroad circles that on the strength of the results early and important changes will take place in railroading.

RICHARD GUENTHER,
Consul-General.

FRANKFORT, GERMANY, *November 27, 1903.*

ELECTRIC ROADS IN ITALY.

(From United States Consul-General Guenther, Frankfort, Germany.)

The Frankfort Journal of Commerce states that electric propulsion by means of accumulators on the Italian Meridional route has not proved a success.

The management of the road has therefore been authorized to discontinue this electric system on certain lines and to replace it by steam.

The electric system, however, by trolleys over the 90-odd miles of the standard-gauge railroad along Lake Como has met all requirements.

Some days ago a meeting of interested parties took place at the instance of the chambers of commerce of Milan, Lecco, and Chiavenna, which resolved to request the Government to immediately establish the trolley system upon the lines of Lecco to Milan. The results with the electric system with a third rail over the 45 miles of the standard-gauge Milan-Varese-Porto Ceresio railroad have been entirely satisfactory.

The traffic on this line, which connects Milan with Lake Lugano, has increased surprisingly on account of the cheaper rates, number of trains, and quicker time. The management of the road is perfectly satisfied with the financial result.

The Mediterranean Railroad contemplates the extension of the electric system with a third rail over the lines Verese-Laveno-Gallarati-Sesto Calende-Arona, so that then Milan will be directly connected with the upper Italian lakes by four electric standard railroads.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *November 9, 1903.* *Consul-General.*

NEW MEXICAN RAILWAY.

(From United States Consul-General Hanna, Monterey, Mexico.)

I have to report the completion of the San Pedro-Paredon branch of the Mexican Central Railway, extending from Monterey to Torreon. The first trains were run over this division on December 2. The completion of this branch gives Monterey another direct railway connection with the United States, and will be an advantage to northern Texas and in fact to all of the western part of the United States.

By the completion of this road the port of Tampico, on the Gulf of Mexico, is connected with the main line of the Mexican Central by way of Monterey, which will be an advantage to New York shippers desiring to use a part water route for their freights bound for the western part of Mexico.

It is understood that within a short time through trains from the United States will be running into Monterey by this new route. The Mexican Central is one of the great systems of railroads in Mexico; it is well built, well managed, and splendidly equipped with American locomotives and cars. Through trains now run from the northern cities of the United States to Mexico City over the main line.

I am informed that the Mexican Central Company has given an order for 2,000 new freight cars, which are being built in the United States, and that they have also given an order for 86 locomotives.

PHILIP C. HANNA,
MONTEREY, MEXICO, *December 4, 1903.* *Consul-General.*

FRENCH RAILWAY MANAGEMENT.

(From United States Consul Jackson, La Rochelle, France.)

This section of France is served by the French State Railway, and the service in everything but speed is excellent, although time is being gradually diminished by special trains.

This city should be within six hours of Paris, while at the present time it takes seven and one-fourth hours to make the journey of

about 300 miles by the best train. A great deal of time is lost on this railway system by long stops at stations. This is particularly true of the accommodation, or omnibus, trains. Then, also, there is room for improvement in train connections; for instance, from La Rochelle to Cognac is only 62 miles, yet the best train, with connections, takes two hours and fifty-three minutes to cover that distance. A delay of twenty-four minutes occurs at Saintes and several minutes are lost at various other stations. These increase the length of the journey. Twenty and five-tenths miles an hour for this distance is not a high speed, and, taken by itself, gives no conception of the service of this railway system.

Concerning the rolling stock, there has been a marked improvement in recent years. The machines are larger and more powerful. Among the locomotives are 20 Baldwin engines, which appear to be giving excellent satisfaction.

The expresses from Paris to Bordeaux and from Bordeaux to Nantes are vestibuled corridor cars of three classes. The comfort of the second and even of the third class carriages surpasses anything that I have seen on other French lines.

There is an attempt to replace on all trains the old boxlike compartment cars with the more modern vestibuled compartment carriages.

The night expresses have two kinds of sleeping accommodations, one of which is called "lit-toilette" and costs double the other, which is called the "lit-couchette." Each train has its dining car, containing a smoking room.

The administration of the State has tried to make railroad traveling popular, and it has been successful, as it deserved to be. Special excursion rates to all points at various seasons and holidays are arranged in such a manner as to encourage railroad traveling, and people appreciate and profit by the circumstances.

The officers and employees of the road are always polite and accommodating and spare no pains to render the patrons of the road comfortable.

The administration deserves much credit for the increase in the efficiency of their service and its present popularity.

GEORGE H. JACKSON, *Consul.*

LA ROCHELLE, FRANCE, *December 9, 1903.*

FRENCH AUTOMOBILE RAILROAD.

As of interest to American inventors, United States Consul B. H. Ridgely, of Nantes, France, under date of December 28, 1903, sends the following translation of an article which recently appeared in the columns of *L'Illustration* descriptive of a French "automobile railroad:"

One of the most striking novelties of the automobile salon is the road train of continuous propulsion of Col. Ch. Renard, director of the Park Aerostatique de Chalais-Meudon. This train is designed to transport passengers and merchandise at a moderate speed. Up to the present, automobilism has been, above all, synonymous of speed. Each manufacturer has bent his every effort to construct a type more rapid than his competitors. As to vehicles destined to carry heavy loads at slow speed, these have disappeared from the eyes of the public before the greater number of rapid carriages. If this means of transportation which responds to real needs has not been more fully developed, it is largely due to divers difficulties of a technical order. There are two ways of solving the problem—either to use isolated vehicles, or to hitch a locomotive tractor to a train of coaches or wagons. The first solution is evidently the most expensive, since it exacts a motor for each vehicle and a machinist to conduct it; besides, it only permits of transporting a relatively light load, unless the vehicles are made of weight and dimensions too great to be practical. As to road trains, they have encountered grave difficulties.

In this train there is, so to speak, no tractor. One of the carriages, the head one, is furnished with a motor—steam or essence—sufficiently powerful to draw the entire train at the desired speed. The power engendered by the motor is distributed to all of the vehicles of the train, and each one of them is provided with an arrangement by the aid of which the energy that is due to it is employed to work a pair of wheels, so that each carriage is a "motrice" to the same degree as the first, with the difference that the first is at the same time a "factory of energy."

Each carriage works itself with the same facility as an isolated automobile. The adherence is therefore no longer due to the weight of the tractor, but to the weight of the entire train. One can thus make the tractor as light as an ordinary carriage and hitch it to as many carriages as desired without fearing the least sliding. The automobile at the head of the train, provided with a motor (essence) of 50 horsepower, weighs only $1\frac{1}{2}$ tons, and it suffices to furnish the necessary energy to draw a mixed train—passenger and merchandise—formed of seven or eight light vehicles, carrying a load of 10 tons, at the rate of about 12 miles an hour. The method of transmission of the energy from the motors to the divers carriages is purely mechanical. It consists of a longitudinal shaft running from one end of the train to the other. This shaft is articulated in a manner to permit the train to mold itself to the most complicated curves.

The parts uniting the different carriages are easily uncoupled to permit the separation or reunion of the carriages at will. Under each carriage there are cogs which transmit the rotary movement of the shaft to an arrangement similar to that used in automobiles and working one pair of wheels. All of this obeys the manipulation of one machinist on the locomotive carriage at the head of the train. To conduct such a train involves no more difficulty than that of running an ordinary automobile. The second principle applied by Colonel Renard is that of "correct

turning." It consists of a special disposition by means of which each carriage of the train follows exactly the track of the preceding one.

The automobile train furnishes a practical solution of industrial transportation over interior roads and highways. It will, in many cases, do the services of railroads in regions not yet reached by railway or tramway lines. It is, in short, a tramway without rails and opens up a great prospect of practical possibilities in the field of transportation.

TRAMWAYS AND STREET-CAR LINES IN LIEGE.

(From United States Consul McNally, Liege, Belgium.)

Five companies control and operate the surface transportation in Liege, as follows:

1. La Société Anonyme des Tramways Est-Ouest de Liege and Extension, which operates 11 miles. Part of their concession expires in 1919 and the balance in 1941. This company has asked for a concession to extend its line to connect with the grounds of the International Exposition to be held at the city of Liege in 1905.

2. The Société Anonyme des Railways Economiques de Liege-Seraing and Extensions controls and operates a line of about 9 miles, and has just received a concession continuing its grant for fifty years.

3. The Société Anonyme pour l'exploitation des Tramways Communaux Liegeois operates 7 miles and is the property of the city. Its grant expires December 31, 1910.

4. The Société Anonyme des Tramways Liegeois operates a line of 6 miles, the concession for which expires in 1919. This company has petitioned the Government of Belgium and the city of Liege for a concession to operate for thirty years three new lines of about 7 miles, and has offered to operate the lines belonging to the city for thirty years and a line outside the city limits to connect with one of the three lines above mentioned.

5. The Société Anonyme de Tramways de Cointe operates a line from the city to the Cointe, which is considered a scenic railway. The line is about 1 mile in length, in which distance it rises to a very high elevation.

The Tramway Liegeois has been voted a concession of thirty years' duration for the operation of four lines, viz, Herstal, Angleur, Renory, and Guillemins Longdoz. The beneficiary under this grant agrees to pay to the city 35 per cent of the total receipts of the existing lines, 5 per cent on the total receipts on any new lines built, together with one-third of the profits. The road and rolling stock are the property of the city. The beneficiary further pays to the city yearly 4 per cent of \$115,800, which amount must be paid in the aggregate during the life of the concession. The present working company has but one class, while the new company will carry

both first and second class passengers, the fare for the first being 15 centimes (3 cents) and the second class 10 centimes (2 cents).

These lines, together with the contemplated new ones, will give a total of 40 miles.

Besides these tramways there are several lines of street railways connecting Liege with the smaller places beyond the city limits, the length of which is about 6 miles, making the total in Liege about 46 miles.

One line now being operated by small locomotives with steam as the power is about to change for electricity. This line is known as the Liege-Jemeppe.

The street-car system in Liege is very good, as well as being cheap. The car stops only at certain defined stations, correspondingly close. When the passenger pays his fare the conductor gives a ticket, which must be retained, as an inspector oftentimes comes aboard and requests that the same be shown. When the seats of the car are occupied no standing is allowed inside the car. Passengers can not stand on the front platform, and while they come in at the rear of the car, those wishing to get off do so by the front door, thus avoiding a squeeze through a crowd on the rear platform. Motor-men and conductors are uniformed and are extremely polite and attentive to passengers. The "room-for-one-more" idea does not work in Liege, as far as the inside of the car is concerned. Those having seats can ride to their destinations in comfort.

JAMES C. McNALLY, *Consul.*

LIEGE, BELGIUM, *November 27, 1903.*

RAIL MOTOR CARS AND MOTOR-CAR SERVICE IN ENGLAND.

(From United States Consul-General Evans, London, England.)

The construction of a railway motor coach, which is the latest development in locomotive engineering and a departure from the ordinary method of working passenger traffic, has aroused considerable interest. The following interesting particulars relate to the new vehicle that has been designed by Mr. D. Drummond and built at the Southwestern Company's works at Nine Elms brought into use on the Southwestern and South Coast Joint Line between Fratton and Southsea.

The coach body is carried on a channel iron frame which is 56 feet long over all, is borne on two 4-wheel bogies, and is divided—as regards its passenger accommodation—into two compartments,

first and third, these being separated by a sliding door. The first-class compartment, where the seats are placed longitudinally, is intended to seat 10 persons. The third-class compartment, where the seats are arranged in pairs, transversely on either side of a central gangway, holds 32 persons—a total of 42 in the two compartments. Access may be had to the coach at both ends from wide platforms, which have openings on either side, these being closed by collapsible gates when running. There is a luggage van capable of holding 1 ton of luggage, and immediately in front of this is the engine, which is of exceedingly compact design. The boiler is placed on the center line and is of vertical type, with vertical and cross tubes. The cylinders are inclined, and the connecting rods drive direct onto pins on the front wheels. A separate draglink serves to work the valve gear. There are no flexible steam couplings, the boiler and the cylinders being on the same frame. The wheel base is 8 feet and the wheels are solid. The cylinders, of which there are two, are 7 inches in diameter, with a 10-inch stroke. The rate of acceleration gives the coach a velocity of 30 miles an hour in thirty seconds. The coach can be driven from either end, there being connecting rods and levers to work the steam valve and brake handles. In practice, however, it is always driven from the engine end, though the man at the rear, who is conductor and ticket collector, is able to either start or stop, if need be. There is electric communication between the engine and the car. The working of the vehicle has proved quite satisfactory.

RAIL MOTOR-CAR SERVICE.

The rail motor-car service between Chalford and Stonehouse stations, which is in addition to the service of the ordinary trains, commenced on Monday, October 12, 1903. A car runs every hour for about twelve hours daily—except Fridays and Saturdays, when the cars run later—leaving Chalford at 8 a.m. and stopping at several intermediate stations. The single trip occupies about twenty-three minutes.

Tickets are issued to passengers on the car itself, on the tramway principle. Space is provided for parcels traffic and for small hand luggage, such as the passengers can look after themselves, and which does not interfere with the seating accommodation.

H. CLAY EVANS, *Consul-General*.

LONDON, ENGLAND, *December 4, 1903.*

PROPOSED ELECTRIC RAILWAY IN CUBA.

(From United States Consul Baehr, Cienfuegos, Cuba.)

Cienfuegos has railway communication with Habana, Matanzas, Cardenas, Sagua la Grande, and Caibarien on the north coast, with Santa Clara in the interior, and thence, since the completion of the new Cuban Central Railroad, with Santiago.

A project is now under consideration by local and American capitalists for the construction of an electric railway extending from this city into the interior, a distance of 30 miles or more, which would give rapid transit between Cienfuegos and several important villages in the sugar-producing belt, these towns now having very inadequate communication with this port. I am credibly informed that a company has been organized to carry the project into effect, that a charter has been applied for and obtained, and that only a short time will elapse before the beginning of active work on the grading of the road. If this enterprise is carried to fulfillment, as seems reasonably certain, it will not only give employment to a large number of laborers who now find steady work only during the sugar-grinding season, but will contribute in no small degree to the material upbuilding of this section of Cuba.

For the information of American dealers in electric and railroad supplies, I will state that the name of the company undertaking this work is the Cienfuegos, Palmira, and Cruces Electric and Power Company, with headquarters at Cienfuegos.

MAX J. BAEHR, *Consul.*

CIENFUEGOS, CUBA, *November 23, 1903.*

RAILROAD IMPROVEMENTS IN MEXICO.

(From United States Consul-General Hanna, Monterey, Mexico.)

I am informed that the work of changing the gauge of the Mexican National Railroad has been completed, and that the entire road, which was until a year ago the longest narrow-gauge railroad in the world, is now standard gauge from Laredo to the City of Mexico and that standard-gauge trains are running over the entire length of this system of railway. The branch road of the Mexican National running from Corpus Christi, Tex., and connecting with the main line at Laredo has also been changed to standard gauge.

About \$13,000,000 gold has been expended in rebuilding the roadbed, changing the gauge, and in furnishing modern railway

equipment for this road. Within a short time it is the purpose of the National Railroad officials to run through trains from St. Louis to the City of Mexico. The whole system is being equipped in first-class manner, its locomotives and cars were built in the United States, and its passenger trains are equal to those of the trunk lines in the United States.

The National Railroad is also building a line from Monterey to Matamoros, which will probably be completed within a few months. The building of this line will open up a rich territory, which will undoubtedly be settled by persons interested in agriculture and mining. The completion of this branch will connect with Brownsville, Tex., to which city two roads are being built from the North, and when this line is completed it will give Monterey another connection with the United States.

PHILIP C. HANNA,
Consul-General.

MONTEREY, MEXICO, *November 26, 1903.*

SIBERIAN-MANCHURIAN RAILWAYS.

(From United States Commercial Agent Greener, Vladivostock, Siberia.)

The Siberian Railroad asks for an appropriation of \$303,459 for 1903 for a connecting line of the Trans-Baikal Railroad with the Manchurian, and \$10,300,000 for the Circum-Baikal. The Chinese Eastern Railroad Company has surrendered to the newly formed Siberian Association its steamers that kept up communication between the ports in Tartary Bay, in Peter the Great Bay, in the Okhotsk and Bering seas, and between Vladivostock and the ports of Korea, Japan, and China. The railroad company retains only the steamers *Manchuria* and *Mongolia* for communication.

The Ussuri Railroad's exploitation has not been able to make both ends meet. The deficits have been considerable, and a reduction in the salaries of the employees is imminent.

The work of constructing the Peking-Kalgan line will soon begin; necessary funds are now being collected. According to last year's decision, this line must be built by Chinese capital, and the shareholders must all be Chinese officials or military people. Of the net income 30 per cent will go to the Chinese Government, 30 per cent to shareholders, 1 per cent for running expenses, and 1 per cent premium to employees. The largest portion of the capital will be supplied by the Russo-Chinese Bank, which will make the railroad a Russian concern.

Russian exporters—Moscow, Warsaw, etc.—have been seeking a way to secure cheap rates for the transit of their merchandise across

Siberia. It was suggested that a combination of railways and sea-going and river lines should pool issues and give Russian goods a better chance to compete with foreign goods in the far eastern market. While the railroads readily offered rebates in a line with their usual reduction, the Volunteer Fleet Company refused, probably because their rates are already at bottom figures, considering the distance. Therefore, the Amur Steam Navigation Company, almost out of business at present, is the only one to take part in such rebate for Russian goods via Stretensk. With railroad lines under Government control, the Volunteer Fleet Company a subsidized Government concern, and the Amur Steam Navigation Company also subsidized by the Government, such a pooling of issues would seem easily accomplished.

The Moscow Board of Trade applied to the Government to have a fast merchandise train on the Siberian Railroad for Manchuria to leave Moscow daily. The Government is willing to grant this request, but the question now is, What merchandise will this train carry? The Moscow manufacturers seem to have given up all intention of competing with the Japanese, who have taken complete possession of the Manchurian dry-goods trade to such an extent that it seems impossible for the Russians to dislodge them.

With regard to the transportation of tea, the Russian importers are still shy of the Manchurian Railway, receiving the product by other ways, for the reason that they can not get their goods insured by Russian companies for transit across Manchuria.

RICHARD T. GREENER,
Commercial Agent.

VLADIVOSTOCK, SIBERIA, *October 5, 1903.*

ELECTRIC INVENTIONS AND EXPERIMENTS.

(From United States Consul-General Hughes, Coburg, Germany.)

Railway engine.—Experiments have recently been conducted on the 1-meter-gauge line connecting St. Georges de Commiers and La Mure, in the Department of Isère, with a 500-horsepower electric engine, using a continuous current at 2,400 volts. This engine, constructed by the Geneva Works, weighs 50 tons, is $12\frac{1}{2}$ meters (4.1 feet) long, and admits a speed of $22\frac{1}{2}$ kilometers (14.6 miles) per hour, with a load of 110 tons, over the stretch of line rising on an average 0.0275 meter per meter (1.08 inches per 39.37 inches) and with curves of 100 meters (328 feet) in radius. The electric power required is supplied by the hydro-electric plant operated by the Drac

torrent. The line is worked on the three-wire overhead system, the current being delivered by means of a top-head trolley.

Suppression of synchronizing.—A method of reducing or entirely suppressing the synchronizing or equalizing currents which flow between single or multiphase alternators is described in a patent recently secured by a Bohemian inventor. In the arrangement employed for securing these ends, the alternators are connected to the primary windings of a pair of transformers placed between the alternators, and of which the secondary windings are connected together. The windings are arranged so that normally the magnetic effects of the currents in the primary and secondary windings balance each other. In the case of a larger number of alternators a corresponding number of transformers is used, all the secondary windings being connected together in series. For three-phase machines, three-phase three-core transformers are employed, and in each case the primary windings of the transformer and the armature windings of the generator have a common neutral point.

Regulating consumption of energy.—A Viennese invention provides a method of, and means for, automatically regulating the consumption of energy in a system of electric traction. The current is supplied by a compound-wound generator, of which one field winding is in connection with a separate exciter, while the other is in series with the mains leading to the motor. These two windings are arranged in such a manner that they act in opposition, so that the voltage of the generator is varied automatically in a contrary sense to the main current, which avoids the necessity for employing starting resistances in the main motor. The motor field may be separately excited by a battery with a reversing switch and rheostat for adjusting the strength of the field as required. In applying the invention to electric railways, independent generators are employed for supplying the separate leads of a number of line sections, on each of which not more than one train is running at the same time.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *November 13, 1903.*

Consul-General.

BLOWPIPE METAL WELDING.

(From United States Consul Halstead, Birmingham, England.)

From the Birmingham Daily Mail I get the information that there is now on view in Birmingham an invention for the seamless welding of iron, steel, and other metals by heat produced by the burning of acetylene with oxygen. With a special blowpipe and the mixture mentioned above the welding of iron and steel, etc., is done in the

same way "as a plumber deals with lead." The acetylene is supplied in cylinders in a state of absorption by acetone, which has the property of dissolving ten volumes of the former for each atmospheric pressure, thus obviating all danger that has hitherto existed in the compression and storage of acetylene. It is stated that the process has been sanctioned by the Home Office after exhaustive experiments. The separate gases are passed through valves, which reduce the initial pressure in the cylinders to about 7 pounds per square inch on the blowpipe. The acetylene when ignited produces an intensely luminous glare, which vividness disappears when mixed with oxygen, there remaining a small, greenish-blue flame, which is adjusted to the proper dimensions for producing the greatest amount of heat. The heat zone is practically only about one-eighth of an inch in length, but the temperature is so great that after a very short space of time the metal, wherever it comes in contact therewith, is reduced to a molten state and coalescence follows. Even quartz, it is stated, can be melted as quickly and blown like glass.

The representatives of the Mail saw several pieces of work done, including the welding, instead of riveting, of a sheet of metal intended to form the body of a foot warmer for railway cars—the joining of two pieces of metal which when rolled out cold into half thickness gave not the slightest indication of a joint. In order to test the strength of joints experiments with compressed gas cylinders have been made; these, about 6 inches in diameter, with longitudinal and circumferential seams at the ends and also a boss welded in the center, withstood a pressure of 2,000 pounds to the square inch. Although the heat produced by the fusion of acetylene and oxygen is so great, operations can be performed with the naked eye. The patentees claim that the invention will be useful in making the construction of framework in the cycle trade stronger, while the apparatus might also be used in filling up corroded places or patching steam boilers.

MARSHAL HALSTEAD, *Consul*.

BIRMINGHAM, ENGLAND, *November 17, 1903.*

NEW GAS-GENERATING PLANT.

(*From United States Consul-General Hughes, Coburg, Germany.*)

To the increasing popularity of the gas engine and the decided economy found to result from the use of "producer gas" instead of illuminating gas for this motor must be attributed the attention lately given to the producing machinery itself with the view of improving and cheapening it. One very obvious objection to the gas-producing plant as usually constructed is that a steam boiler is

always necessary, for steam is required in the process. This, with the ordinary gas holder, constitutes a cumbrous lot of machinery, occupying a large amount of space. The boiler itself adds very much to the cost of the plant and introduces other evils inseparable from steam generation. These impediments to the more rapid adoption of the gas engine have been considerably lessened by the "suction gas-generating plant," which has been introduced by J. E. H. Andrew & Co. (Limited), of Stockport, England. There is no steam boiler required in this arrangement, nor is there any need for a gas holder. Any steam that is required is vaporized by the heat of the generator itself, and as it is not under pressure there is nothing to fear on the point of safety. It is hardly possible to describe the working of the apparatus without sectional drawings; but, as its name implies, the engine itself "sucks" its own gas from the generator as soon as it is set to work. The coke scrubber is a vessel through which the gas is drawn, and it is thus freed from dust and cooled by a stream of cold water, which is sprinkled in the top of the vessel. After passing through the coke scrubber the gas is ready for use by the engine. The engine itself continues to draw gas as long as it is at work, so that the gas used is no more than is required by the load on the engine, and there is no gas generated when the engine is stopped.

The many advantages of this apparatus must be obvious, for, besides occupying but a small space, it is really extremely economical in maintenance. It is proved by experience that the fuel costs only about half a cent per horsepower per hour.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *October 28, 1903.*

Consul-General.

WATER AND ELECTRIC POWER IN ISÈRE.

(From United States Consul Nason, Grenoble, France.)

UTILIZATION OF WATER POWER IN ISÈRE.

Last year I wrote of the utilization of the power in the glacial and mountain streams of the Alpine region of France. The utilization of this force in distributing electric energy is transforming the conditions of labor and lifting Isère into one of the most important Departments in France. It is estimated that the hydro-electric energy obtained through waters already "harnessed" is equal to 75,000 horsepower, while the hydraulic factories, more than a hundred in number, in which the water similarly "harnessed" is utilized directly represent a horsepower rising from 20,000 in the year 1880 to 140,000 in 1900.

ELECTRIC LIGHTING OF GRENOBLE.

By the end of this year the city of Grenoble will have installed its new system of electric lighting from a water-power source 27 miles distant, in the valley of the Romanche.

At the present time the electric cables are being laid throughout the city. These cables are 2 inches in diameter, tar covered, and all placed 3 feet under ground and covered by a layer of tile plates. An abundance of light, heat, and power at a greatly reduced cost will thus be available for distribution.

During the first half of the year (1903) the street-car lines from Grenoble to Sassenage, Uriage-les-Bains, and Vizille, heretofore served by steam "dummies," were operated by electricity. At Vizille, the old historic chateau, with its lake and park—the work of the renowned Lesdiguières three hundred years ago, and whence issued the first flame of the French Revolution—is now undergoing transformation at the hands of an English company and will be opened as a first-class hydro-electropathic establishment next season.

C. P. H. NASON, *Consul*.

GRENOBLE, FRANCE, *November 2, 1903.*

STOPPING RAILROAD TRAINS AUTOMATICALLY.

(*From United States Consul-General Guenther, Frankfort, Germany.*)

Technical Correspondence gives the following brief description of a new device for the automatic stopping of railroad trains, an invention patented by Engineer Hegge-Zynen, of Hanover, Germany:

The device by which a train can be stopped without the aid of any of the train employees, and which at the same time notifies one or more of the nearest railway stations of the occurrence, consists of a contact apparatus which is so placed between the rails that a plate, fastened to the lowest part of the air-brake pipe under the tender, is touched in passing over it. In consequence of this a valve is opened and the train is stopped through the air brake.

The device is put up like a pendulum, attached to which is a counterweight so that the apparatus, which in a vertical position closes the line, can be turned down from the nearest watchman's house by means of a wire and the line in this way be opened.

The interior of the head of the apparatus contains a shell, made of insulated material, connected with three electric wires, well insulated from each other. One in the middle is connected with a brass plate, while at the ends of the other two brass contact springs are placed diametrically opposite each other. On each of both sides of the brass plate a brass peg with a steel head is adjusted, which protrudes from the head of the contact apparatus. Both pegs are kept by springs in close proximity to the brass plate.

If, when the line is closed, the brass plate connected with the air-brake pipe hits the head of the contact apparatus, the plate is thrown back, the valve of the air brake is thereby opened, and the train stops. In addition the peg on that side

is forced into the interior of the apparatus, the circuit becomes closed, and the bells connected with the wires are sounded. Through the joint use of several apparatus of this system it is possible to prevent a collision of this stopped train with others. The apparatus can be placed at any point desired; it operates in both directions—also during a fog—and is relatively inexpensive.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *December 11, 1903.* *Consul-General.*

DISPELLING FOG BY ELECTRICITY.

(From United States Consul-General Guenther, Frankfort, Germany.)

The following article, translated from a German paper, may prove of interest to the ferryboat traffic of New York and to other American maritime interests. It deals with a method of dispelling fog by electricity.

The eminent English electrician Sir Oliver Lodge, a scientist of world-wide fame, recently delivered a lecture of extraordinary interest before the Physical Society of London. It was especially interesting as it shows how, from a quite unimportant appearing observation, a discovery of eminent practical importance may finally result.

The great physicist Tyndall had demonstrated decades ago that a heated body, if brought into a lighted atmosphere laden with dust, dispels the dust in its nearest environment and forms a dark space around itself.

Tyndall thought that the hot body consumed or burned the dust—in his experiment, an organic one, with coal dust.

Twenty years ago Professor Lodge resumed the investigations of the same subject jointly with the physicist Clark and soon found that the explanation surmised by Tyndall was incorrect. It was found that a sort of a bombardment emanated from the heated body, which kept the dust at a certain distance.

Lodge made the still more important discovery that if he employed electricity in place of heat the dust particles acquired a polarity for forming into balls, and were thrown against the walls of the vessel in which the experiments were made. In his experiments he did not use coal dust or smoke, but an inorganic dust, namely, finely powdered magnesia. For the heated or afterwards electrified body he used a wire. As early as 1884 Lodge demonstrated his new discoveries in instructive experiments before the British Association for the Promotion of Science, then in session at Montreal.

Two pieces of wire netting which were connected with the ends of an electrifying machine were put up opposite each other in a room through which a slow current of smoke passed. After the wire nets had been electrified the current of the smoke ceased; the particles of dust, balled together, were driven to the wall of the room and fell to the floor. If steam was introduced instead of smoke it was converted into fine rain.

This latter result led Professor Lodge to several conclusions. First, it almost showed by itself how rain was formed from the clouds through electrization, a fact for which, even if it had been surmised, every proof was lacking. Furthermore, Lodge concluded it would be possible to dispel a fog cloud by electricity.

He made his first fog-dispelling experiment at Liverpool, where he was lecturing as professor of physics.

During a thick fog the air about the university was electrified by means of a

large "Winhurst" machine, the current passing through a bunch of points on top of a high mast erected on the roof of the building. In this manner it was spread as much as possible. The result was that for a radius of from 165 to 200 feet the air was perfectly clear—*i. e.*, free from fog.

At that time the scientist conceived the plan for a trial on a large scale by placing a sufficient number of stations on both sides of the Mersey and charging the air on one side with positive and on the other side with negative electricity in order to see whether a mass of fog on the river, which almost regularly caused collisions of vessels and heavy damages in consequence, could not be dispelled.

Although the practical benefit was apparent, Professor Lodge did not meet with sufficient support and his experiment had to be abandoned for lack of funds.

He feared, furthermore, that he could not procure a sufficiently strong current, as a dynamo does not furnish the required high voltage. This problem was solved by the interpolation of the recently invented quicksilver lamp, which permits of the conversion of an alternating current of high voltage into a continued current.

Experiments to this end have been conducted at Birmingham.

In order to demonstrate the latest results Professor Lodge made some experiments in dispelling fog by the electric current before the Physical Society.

The fog was produced by burning magnesium, the smoke being confined in a large glass reservoir.

By introducing an electric current into the lighted cloud of magnesium the latter was immediately precipitated and fell down like snow, leaving the air perfectly clear.

Mr. Lodge did not hesitate to follow up his discovery. There exists, he says, no reason why the vapor particles of a cloud can not be forced by electrification to contract and to fall down in the form of rain, a possibility which, for a country like India, would be of incalculable value, where unfortunately the dark clouds of the "monsoon" quite frequently pass away without becoming rain and so deliver the country over to famine. For a metropolis like London the advantage would be twofold—on the one hand, to get rid of the coal smoke, and, on the other, to dispel the fog.

The realization of these expectations would hardly be more improbable than the practical use of wireless telegraphy, and it would perhaps not even require as large machines for the purpose, as fogs usually occur in calm weather and rarely reach high altitudes.

The difficulty lies only in the cost of experiments and Mr. Lodge, therefore, finds his consolation in the expectation that later on England will be rich enough to contribute sufficient funds for such purposes.

RICHARD GUENTHER,

FRANKFORT, GERMANY, *December 4, 1903.* *Consul-General.*

PROPOSED BRITISH COLUMBIA-YUKON RAILWAY.

(From United States Consul Dudley, Vancouver, British Columbia.)

Since the decision in the Alaska boundary case was announced there has sprung up in this vicinity a very energetic movement for the construction of a railway into the Yukon Territory from this Province. In this city the desire is to have the railway built directly from here to Dawson, in the Yukon Territory.

There are other propositions spoken of, especially by the inhabitants of the northern portion of the Province for a railway from Kittimat Arm to Dawson. This movement has now taken official shape in this city, as is shown by the following preamble and resolution adopted by the city council last evening.

L. EDWIN DUDLEY, *Consul*.

VANCOUVER, BRITISH COLUMBIA, *November 30, 1903.*

PREAMBLE AND RESOLUTION OF VANCOUVER CITY COUNCIL.

Whereas, owing to the decision of the Alaskan Boundary Commission having assured to the United States of America the ports and harbors lying north of British Columbia on the Alaskan coast, it has become necessary in the interests of Canada that an all-Canadian railway should be built and operated through British Columbia and the Northwestern Territories to Dawson; and

Whereas from the observations and the practical experiences of explorers, surveyors, and engineers it has been ascertained that between the southern boundary of British Columbia and the northern boundary and at an average distance of 150 miles from the coast line, there exists a country rich in agricultural, mineral, and timber resources capable, when developed, of carrying a large population; and

Whereas large beds of coal, far superior in quality to any others known on the Pacific coast, lie undeveloped in the country from which the Bulkley River and its affluents flow; that the coke produced from this coal is of the very best quality; that there are large deposits of hematite iron ore in the neighborhood of Fort George on the Fraser River, not far from the beds of coal above mentioned; that large deposits of copper ore have been discovered not far from the Pacific coast; that large tracts of valuable timber exist in the district from which the Lillooet River flows and in other districts through which a railway running north would traverse; and that these natural resources lie ready to be developed and made use of as soon as connection is afforded; and

Whereas it has been ascertained and it is known that a railway could be built from Vancouver running north to Fort George, a distance of about 500 miles, and then north to Dawson, a farther distance of about 900 miles, at a comparatively small cost, owing to the fact that the route it would follow is nearly level and no heavy grades exist; that such a railway would run through a moderate climate that would offer no great difficulties to its operation, at least as far as Fort George; that, owing to the natural resources that are known to exist on the route as above stated, such a railway would draw considerable traffic and in a greater degree than any other railway running north through the Province could command. Such a railway would also have a very large freight and passenger traffic passing over it from the south of the 49th parallel into the easterly and central portion of Alaska. Such a railway would also connect the great transcontinental railways—*i. e.*, the Canadian Pacific Railway, built by the Grand Trunk Railway Company and by Messrs. Mackenzie & Mann; and

Whereas it has been ascertained that a line of railway from Vancouver running north to Dawson would traverse the country above described as being rich in resources at distances from point to point as under:

“From Vancouver, Pemberton Meadows, to Lillooet, an approximate distance of 150 miles; thence northerly to Quesnelle mouth, an approximate distance of 190 miles; thence northerly to Omenica, an approximate distance of 240 miles;

thence northerly to the northern boundary of the Province of British Columbia, an approximate distance of 360 miles—total length of main line in British Columbia, 940 miles; the continuation of the main line from the north boundary of British Columbia to Dawson will be 440 miles, a total distance from Vancouver to Dawson of 1,380 miles—"

The whole of it being easy of construction at a reasonable rate and can be operated the whole year around; and

Whereas the construction and operation of such a road that would intersect with the transcontinental roads through Canada would insure the trade and business of the Yukon being diverted into its proper channel—that is, Canada. The fact of an all-Canadian railway running from Dawson to a port in the north of British Columbia and not connecting with both transcontinental railways would entail a loss to the country in trade and commerce, as the United States would continue to trade with such port and business would continue to go by the southern ports of British Columbia to Seattle as it, to a very large extent, has hitherto done; and

Whereas reports from the following distinguished engineers, viz, Dr. Selwyn, Dr. Dawson, and A. L. Poudrier, esq., all show that there exists a country through which this railway would run from 5,000,000 to 6,000,000 acres, which can be utilized for cattle raising, wheat and grain growing to the best advantage, now lying unprofitable to the country; and

Whereas it is considered to be of the utmost importance for the future welfare of Canada, and British Columbia in particular, that these fertile lands should be opened up and become populated, and also that the trade and commerce of the Klondike and the Yukon should be kept, as far as possible, wholly in Canadian territory; and

Whereas to accomplish that object it has been shown that a railway built inland right through British Columbia would be a most effectual way of accomplishing the above object, and such a railway is easy of construction and the necessity is immediate:

Be it therefore resolved, That a copy of this resolution be forwarded, through the members of the district, to both the Dominion and provincial governments with an urgent request that such governments may be pleased to take such steps as may, in their opinion, be considered advisable by subsidizing by grant of money or land or guaranteeing the bonds of a railway company that will undertake the construction of such a line as above outlined at as early a date as possible.

CANADIAN RAILWAYS AND CANALS.

(From United States Consul Seyfert, Stratford, Ontario, Canada.)

STEAM RAILWAYS.

In 1902 there were 18,714 miles of railway in operation in Canada and 18,868 miles of track laid. In addition there are 130.71 miles of railway owned by seven coal and iron companies, six of which are in Nova Scotia and one in British Columbia. The railroads are all of 4-foot 8½-inch gauge, except 3 miles with a 3-foot gauge.

Canada has 165 steam railways, 25 of which form the Grand Trunk system and 27 others the Canadian Pacific system. The remaining 113 railways have more or less consolidated. Three of

these are bridge companies with $4\frac{3}{4}$ miles of rails and one is a tunnel company with $2\frac{1}{4}$ miles of rails.

The Dominion government has contributed at the average rate of \$9,166 per mile of railway constructed; the provincial governments, at the rate of \$1,757; and the municipalities, at the rate of \$873 per mile.

The 18,714 miles of steam railways in operation in 1902 effected 55,729,856 train miles, carrying 20,679,974 passengers and 42,376,527 tons of freight, and earned \$83,666,503, at a cost of \$57,343,592 working expenses.

The total weight in tons of freight carried by the steam railways in Canada in 1901 was as follows:

	Tons.
Flour	1,486,354
Grain	4,694,853
Live stock.....	838,895
Lumber	5,301,519
Firewood.....	1,597,159
Manufactured goods.....	5,642,947
All other articles.....	17,437,647
Total	36,999,374

The railways belonging to the Dominion government are known as the Canadian government railway system, and include the Intercolonial and its branches and the Prince Edward Island Railway.

The total mileage of the Intercolonial system in 1902 was 1,333 miles of operated road, including the Windsor (Nova Scotia) branch, 32 miles, and the Drummond County (Quebec) railway, 170 miles.

The Intercolonial system touches at six Atlantic ports, viz, Pointe du Chene, Quebec; Pictou, Halifax, Sydney, and North Sydney, Nova Scotia; and St. John, New Brunswick.

ELECTRIC RAILWAYS.

Following are particulars of electric railways in Canada for the calendar year 1902:

Number sending returns.....	44
Miles of single track.....	421.39
Miles of double track.....	188.09
Motor cars.....	1,895
Trailer cars.....	326
Snow sweepers and plows.....	97
Miles run.....	36,711,130
Passengers carried.....	145,609,993
Employees	5,427
Capital paid up.....	\$25,961,254
Bonded debt.....	\$15,794,408
Gross earnings.....	\$6,865,907
Gross expenses.....	\$4,140,490

CANADIAN CANALS.

What is known as the St. Lawrence system of canals extends from Lachine, near Montreal, via the great Laurentian lakes and their connections, to Sault Ste. Marie, Ontario. These with their feeders have a total length of $73\frac{3}{8}$ miles, with 49 locks. The Welland Canal proper, connecting Lake Ontario and Lake Erie, is $26\frac{3}{4}$ miles long, with a rise of $326\frac{3}{4}$ feet; the depth of the canal between locks being adapted to the passage of vessels drawing not more than 14 feet.

The Ottawa and Rideau River canal system includes a total length of navigable waters of $126\frac{1}{4}$ miles. There are 59 locks, with an aggregate length of $29\frac{1}{4}$ miles. The total distance from Montreal to Kingston by this route is $245\frac{1}{2}$ miles. The lockage is $446\frac{1}{4}$ feet, $282\frac{1}{4}$ feet being rise and 164 feet fall. In the $16\frac{1}{2}$ miles of the Rideau Canal embraced in this system there are 49 locks, 35 of them ascending and 14 descending.

On the upper Ottawa are the Culbute locks at L'Islet. These surmount the Culbute and L'Islet rapids on the northern branch of the Ottawa River, and comprise 2 locks and 3 dams.

The amount expended on Canadian canal works and maintenance, chargeable to capital account, including the amount expended from their income, to June 30, 1902, was \$101,535,862. Of this amount the sum of \$20,692,244 was expended before confederation—\$4,173,921 by the Imperial Government and \$16,518,233 by the provincial governments interested. The total amount spent for construction and enlargement alone is \$86,605,201, including the cost of the surveys of the Baie Verte Canal, which was at one time considered a feasible plan for uniting the Bay of Fundy and the Gulf of St. Lawrence.

The total cost of construction of the Welland Canal to June 30, 1902, was \$24,988,805, of which amount \$222,220 was contributed by the Imperial Government and \$7,416,020 by the Ontario government prior to confederation, leaving \$17,350,565 as the expenditure since confederation.

A. G. SEYFERT, *Consul*.

STRATFORD, CANADA, *November 26, 1903.*

AUSTRIAN SHIP SUBSIDY.

(*From United States Consul Hossfeld, Trieste, Austria.*)

On November 28, 1893, the Austrian Parliament passed a ship subvention law, granting annual bounties and tonnage and distance premiums for each voyage made to all steamers and sailing vessels engaged in the deep-sea or long-coasting trade, provided: (a) Austrian subjects own at least a two-third interest in the same; (b) the

vessels are not over 15 years old; (c) they are registered under class A1 or A2 by the "Austro-Hungarian Veritas" or a similar insurance association.

Iron and steel steamships receive an annual bounty of \$2.44 per ton, while the bounty of iron and steel sailing ships is \$1.83 and that of wooden and part-iron sailing ships \$1.22 per ton. Iron and steel sailing ships have their bounties increased by 10 per cent if built in Austrian shipyards and by 25 per cent if at least half of the raw material used in their construction is of Austrian origin.

If more than one year has elapsed since the launching of a ship otherwise entitled to a bounty, a deduction of 5 per cent is made for each year that has elapsed since the ship was launched.

The premium is 2 cents per ton for every 100 nautical miles, the distance to be computed by taking the shortest sea line.

The law does not apply to ships receiving other State subsidies—as, for instance, the Austrian Lloyd—to regular lines having mail contracts, or to ships belonging to industrial establishments carrying their own goods.

This law will expire on January 1, 1904, and efforts are being made by shipowners to have the present subsidy increased, but the opinion prevails in well-informed circles that an extension of the present law is all that may reasonably be hoped for.

FREDK. W. HOSSFELD, *Consul*.

TRIESTE, AUSTRIA, *October 31, 1903*.

COMMERCIAL MUSEUM AT VIENNA.

This museum places its opportunities for securing information on commercial matters at the disposal of exporting firms. Information is given particularly on the following subjects: Sources of information; opportunities for trade; suitability of certain articles for given foreign markets; condition of markets; usances; methods of packing; detailed information regarding agents, commission houses, and other direct exporting methods; financial responsibility of foreign firms; advertisements for bids; customs and tariffs; inventions and technical improvements; movement of trade; statistics; laws relative to trade-marks and patents; and other commercial data of the greatest importance, all of which will be at the disposal of Austrian firms at home without cost.

The Austrian Commercial Museum gives in its weekly journal, *Das Handels-Museum*, a review of all the important occurrences relating to international commerce. As supplements, without cost, are added the monthly and quarterly and yearly reports of the Austrian consular officers.

The museum also publishes a volume containing the tariffs of all the European countries as well as of the most important foreign countries.

At the Export Academy of the museum graduates of the middle-class schools and industrial high schools will be prepared for a commercial calling. The course extends over two years, at the end of which time a diploma is given.

AUSTRIAN RAILWAY FREIGHT RATES ON IMPORTED PRODUCTS.

(From United States Consul Hossfeld, Trieste, Austria.)

I give herewith a revised table of freight rates from Trieste to inland cities. It should be remembered that the rates given do not include terminal charges, which, however, for large shipments are merely nominal.

Article.	Rate per 100 kilograms (220 pounds) from Trieste to—					
	Vienna.		Budapest.		Prague.	
	<i>Crowns.</i>		<i>Crowns.</i>		<i>Crowns.</i>	
Iron and steel ware:						
Less than 5,000 kilograms*.....	2.90	\$0.58	3.34	\$0.68	4.30	\$0.87
5,000 up to 10,000 kilogramst.....	2.38	.48	2.87	.58	2.82	.57
10,000 kilograms and over.....	2.22	.45	1.97	.40	2.82	.57
Agricultural machinery:						
Less than 5,000 kilograms.....	3.10	.63	3.34	.68	4.30	.87
5,000 up to 10,000 kilograms.....	3.10	.63	2.87	.58	2.82	.57
10,000 kilograms and over.....	2.10	.42	1.97	.40	2.82	.57
Bicycles:						
Less than 5,000 kilograms.....	4.65	.94	7.40	1.50	8.97	1.82
5,000 up to 10,000 kilograms.....	3.90	.79	2.98	.60	4.80	.97
10,000 kilograms and over.....	3.42	.69	2.98	.60	3.76	.76
Paper:						
Less than 5,000 kilograms.....	3.10	.63	3.34	.68	5.98	1.21
5,000 up to 10,000 kilograms.....	3.10	.63	2.87	.58	4.30	.87
10,000 kilograms and over.....	2.88	.58	2.87	.58	3.28	.66
Cotton:						
Less than 5,000 kilograms.....	3.10	.63	3.34	.68	4.84	.98
5,000 up to 10,000 kilograms.....	3.10	.63	2.87	.58	3.30	.67
10,000 kilograms and over.....	2.24	.45	2.87	.58	2.60	.52
Oil, linseed, etc.:						
Less than 5,000 kilograms.....	3.10	.63	3.34	.68	5.98	1.21
5,000 up to 10,000 kilograms.....	2.90	.59	2.87	.58	4.30	.87
10,000 kilograms and over.....	2.36	.48	2.37	.48	2.82	.57
Cotton-seed oil:						
Less than 5,000 kilograms.....	3.10	.63	3.34	.68	5.98	1.21
5,000 up to 10,000 kilograms.....	2.90	.59	2.87	.58	4.30	.87
10,000 kilograms and over.....	2.36	.48	2.87	.58	2.82	.57
Raw iron:						
Less than 5,000 kilograms.....	2.90	.59	3.34	.68	4.30	.87
5,000 up to 10,000 kilograms.....	2.38	.48	2.87	.58	2.82	.57
10,000 kilograms and over.....	1.57	.32	1.57	.32	2.18	.44

* 5,000 kilograms=11,023 pounds.

† 10,000 kilograms=22,046 pounds.

648 AUSTRIAN FREIGHT RATES ON IMPORTED PRODUCTS.

Article.	Rate per 100 kilograms (220 pounds) from Trieste to—					
	Vienna.		Budapest.		Prague.	
	<i>Crowns.</i>		<i>Crowns.</i>		<i>Crowns.</i>	
Blue vitriol:						
Less than 5,000 kilograms.....	3.10	\$0.63	3.34	\$0.68	5.98	\$1.21
5,000 up to 10,000 kilograms.....	2.40	.49	2.87	.58	4.30	.87
10,000 kilograms and over	2.40	.49	2.56	.52	3.28	.66
Smoked and salted meats:						
Less than 5,000 kilograms.....	3.10	.63	3.34	.68	5.98	1.21
5,000 up to 10,000 kilograms.....	3.10	.63	2.98	.60	4.80	.97
10,000 kilograms and over.....	3.10	.63	2.98	.60	3.76	.76
Bacon:						
Less than 5,000 kilograms.....	3.10	.63	3.34	.68	5.98	1.21
5,000 up to 10,000 kilograms.....	3.10	.63	2.87	.58	4.30	.87
10,000 kilograms and over.....	2.88	.58	2.87	.58	3.28	.66
Lard:						
Less than 5,000 kilograms.....	3.10	.63	3.34	.68	5.98	1.21
5,000 up to 10,000 kilograms.....	2.92	.59	2.87	.58	4.30	.87
10,000 kilograms and over.....	2.36	.48	1.97	.40	2.82	.57

Article.	Rate per 100 kilograms (220 pounds) from Trieste to—					
	Graz.		Linz.		Salzburg.	
	<i>Crowns.</i>		<i>Crowns.</i>		<i>Crowns.</i>	
Iron and steel ware:						
Less than 5,000 kilograms*.....	1.97	\$0.40	3.26	\$0.66	3.22	\$0.65
5,000 up to 10,000 kilograms †.....	1.74	.35	2.20	.44	2.18	.44
10,000 kilograms and over.....	1.46	.30	1.84	.37	1.80	.37
Agricultural machinery:						
Less than 5,000 kilograms.....	3.10	.63	5.08	1.03	3.22	.65
5,000 up to 10,000 kilograms.....	2.60	.52	3.30	.67	2.18	.44
10,000 kilograms and over.....	1.56	.31	2.22	.45	2.18	.44
Bicycles:						
Less than 5,000 kilograms.....	4.65	.94	8.86	1.80	9.72	1.97
5,000 up to 10,000 kilograms.....	2.81	.57	4.38	.89	4.28	.87
10,000 kilograms and over.....	2.47	.50	3.56	.72	3.76	.76
Paper:						
Less than 5,000 kilograms.....	3.10	.63	5.08	1.03	4.96	1.00
5,000 up to 10,000 kilograms.....	2.60	.52	3.30	.67	3.22	.65
10,000 kilograms and over.....	2.14	.43	2.64	.53	2.46	.50
Cotton:						
Less than 5,000 kilograms.....	2.40	.49	4.40	.89	4.96	1.00
5,000 up to 10,000 kilograms.....	2.40	.49	2.78	.56	3.22	.65
10,000 kilograms and over.....	2.14	.43	2.60	.53	2.46	.50
Oil, linseed, etc.:						
Less than 5,000 kilograms.....	2.40	.49	4.76	.96	4.96	1.00
5,000 up to 10,000 kilograms.....	2.40	.49	3.26	.66	3.22	.65
10,000 kilograms and over.....	2.12	.43	2.36	.48	2.18	.44
Cotton-seed oil:						
Less than 5,000 kilograms.....	2.40	.49	4.76	.96	4.96	1.00
5,000 up to 10,000 kilograms.....	2.40	.49	3.26	.66	3.22	.65
10,000 kilograms and over.....	2.12	.43	2.36	.48	2.18	.44
Raw iron:						
Less than 5,000 kilograms.....	1.97	.40	3.26	.66	3.22	.65
5,000 up to 10,000 kilograms.....	1.74	.35	2.20	.45	2.18	.44
10,000 kilograms and over.....	1.21	.24	1.68	.34	1.64	.33
Blue vitriol:						
Less than 5,000 kilograms.....	3.10	.63	4.96	1.00	4.96	1.00
5,000 up to 10,000 kilograms.....	2.40	.49	3.30	.67	3.22	.65
10,000 kilograms and over.....	2.14	.43	2.64	.53	2.46	.50

* 5,000 kilograms=11,023 pounds.

† 10,000 kilograms=22,046 pounds.

Article.	Rate per 100 kilograms (220 pounds) from Trieste to—					
	Graz.		Linz. .		Salzburg.	
	<i>Crowns.</i>		<i>Crowns.</i>		<i>Crowns.</i>	
Smoked and salted meats:						
Less than 5,000 kilograms.....	3.10	\$0.63	4.96	\$1.00	4.96	\$1.00
5,000 up to 10,000 kilograms.....	2.81	.57	4.38	.89	4.28	.87
10,000 kilograms and over.....	2.47	.50	3.56	.72	3.76	.76
Bacon:						
Less than 5,000 kilograms.....	3.10	.63	4.98	1.01	4.96	1.00
5,000 up to 10,000 kilograms.....	2.60	.52	3.30	.67	3.22	.65
10,000 kilograms and over.....	2.56	.31	2.64	.53	2.46	.50
Lard:						
Less than 5,000 kilograms.....	3.10	.63	4.98	1.01	4.96	1.00
5,000 up to 10,000 kilograms.....	2.60	.52	3.30	.67	3.22	.65
10,000 kilograms and over.....	1.56	.31	2.22	.45	2.18	.44

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, AUSTRIA, *October 31, 1903.*

IMPROVEMENTS IN THE TRANSPORTATION FACILITIES OF TRIESTE.

(From United States Consul Hossfeld, Trieste, Austria.)

The trade of Trieste, which in the decade 1860–1870 represented 11.5 per cent of the aggregate trade of Trieste, Venice, Fiume, Genoa, Marseilles, Bremen, and Hamburg, has, during the last decade, fallen to about 6 per cent in that trade. The absolute increase of the traffic of Trieste has nevertheless been considerable. From 1898 to 1902 the total tonnage of ships landing cargoes at this port has increased from 2,063,000 tons to 2,500,000 tons, or about 5 per cent annually, and the traffic in the Punto Franco (free port) increased from 956,000 tons to 1,240,000 tons, or 7.6 per cent annually. Although the port was considerably enlarged after the opening of the Suez Canal, it has for some years been apparent that its space and facilities have again become inadequate to its traffic. The warehouses during a large portion of the year are overcrowded and vessels are frequently obliged to wait for days for a berth.

In 1898 the Government asked Parliament for an appropriation to improve the old port and to build a new one at St. Andrea, on the opposite side of the city. For carrying out the first part of the Government's project a credit of \$2,500,000 was voted, and the contract was allotted in December, 1900.

Meantime the construction of two new railroads has been decided upon, which promise to greatly increase the commercial importance of Trieste. One—the Wocheimer, Karawanken and Phyrn Railway—will connect Trieste by a more direct line with Vienna,

Prague, and Berlin; the other—the Tauern Railway—will greatly improve the communication of Trieste with Bavaria and southwestern Germany.

As the increased traffic which these new railways will bring to Trieste will necessitate larger harbor facilities than the present contracts call for, the Government has decided to change its plans and to construct at once a new harbor in the Bay of Muggia of a capacity at least equal to that of the old one to the northwest of the city.

As the transit business constitutes 78 per cent of the traffic of this port, the improvement of the public warehouses will receive special attention. Indeed, the area covered by the projected warehouses is about three times as large as the present, while the projected docks will be about 20 per cent larger than those of the old port.

As much delay and inconvenience is often experienced in the loading and unloading of goods, special attention will be given to improved facilities for handling freight.

There will be in the projected extension 22 warehouses from 395 to 680 feet long and 150 feet wide, the largest ones capacious enough to hold a cargo of 9,000 tons. These warehouses will be provided with 12 cranes of 3 tons, 83 of $1\frac{1}{2}$ tons, and 1 main crane of 50 tons capacity. In order to increase the capacity of the warehouses on the same area, to facilitate the transit within them, and to avoid the clashing of outward with inward bound freights it is proposed to construct along some of the new magazines an upper platform to be used specially in the handling of outward-bound goods, and to reserve the lower platform for arriving freights. While large cranes are available for both platforms along the sea, an elevated railway on iron piles will be provided for the upper platform on the land side, and this railway will be connected with the assorting stations by inclines.

Buildings for custom and police offices, pilots' quarters, and restaurants will also be provided. All cranes, hoists, capstans, and other machinery will be driven by electric power.

A commission which the Minister of Railways recently sent to Milan to investigate and report on the electric railways of Lombardy has recommended the adoption of electric traction for the new lines of railway of which Trieste will be the terminus, and there is a very strong probability that their recommendation will be adopted. In this event the harbor and the new railways would be supplied with electric power by the same plant.

The cost of the new harbor will be about \$22,500,000.

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, AUSTRIA, *October 31, 1903.*

SUPPRESSING MALARIA IN AUSTRIA.

(From United States Consul Hossfeld, Trieste, Austria.)

A Vienna manufacturer, Leopold Kupelwieser, prompted by the result of Professor Koch's investigations relating to intermittent fever, has placed at Dr. Koch's disposal the island of Brioni (situated west of the peninsula of Istria and about 60 miles south of Trieste), to enable him to continue there his investigations. The experiments which Dr. Koch had made in Africa convinced him that malaria could be stamped out in many places where it now prevails, and that where it was possible to isolate such a place the task would be comparatively easy. It is now well known that the microbe of malaria is conveyed from one person to another by the sting of a species of mosquito.

As these insects can not fly very far, an accession of infected mosquitoes from the mainland seemed to be out of the question, and it was hoped that by curing the sick during the cold season and then waging energetic warfare against the conveyer of the microbe the disease could be permanently banished from the island. Dr. Koch therefore accepted the offer made to him by Mr. Kupelwieser and intrusted Professor Frosch and Dr. Blundau, of Berlin, with this mission. Their remarkable success led the Austrian Government to make an attempt to exterminate malaria on the coast of Istria by Professor Koch's method. It caused three malaria stations to be established and detailed physicians, furnished with the finest microscopical instruments, to these stations. The physicians examine the blood of all persons suffering from malaria, and subject all suspicious cases to a systematic course of treatment. Quinine in tablets or capsules is furnished to patients free of cost at public expense. If the work of these stations should be attended with success, it is also proposed to establish similar stations in all those districts of Istria and Dalmatia infested with malaria, for the purpose of removing this great evil.

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, AUSTRIA, *October 31, 1903.*

BELGIAN FIREARMS.

(From United States Consul McNally, Liege, Belgium.)

The firearms industry remains in a satisfactory condition, and while the prices for center-fire arms has decreased a trifle, as is also the case with handmade and interchangeable machine guns, the trade in the better grade of guns, such as the fine fowling gun, is in a very

flourishing condition, and never before has this gun, as manufactured in Liege, been in such universal demand.

Trade in revolvers, which for a time had been a little off, is again picking up. The same may be said for the single-barreled guns, made cheap for export to the coast of Africa.

The markets of South America seem to be in a better condition, and several important orders have come from Brazil and the Argentine Republic.

The manufacture of firearms, complete or in part, is the traditional industry of this Province. Whether the people of Liege hold the secret of turning out a prime quality of gun barrel or other integral part of the arm, I do not know, but it is an established fact that no other barrel of corresponding make and value can stand the strain of the severe test put upon it as well as the Liege gun barrel. Every barrel must, under the law, successfully withstand the Government test before it is admitted for sale. The gun barrels are made by the workmen in their own homes, and are delivered to the merchants, who combine the parts for the markets. It is said that no less than 50,000 men, women, and children are engaged in the manufacture of gun barrels. This system of buying from the people lessens the responsibility of the manufacturer, for if the barrel fails to withstand the test the workman and not the manufacturer is the loser. The material for manufacturing the gun barrels or other parts of firearms is oftentimes supplied by the manufacturer, who sometimes gets his barrels roughly made and completes them himself.

It is the universal understanding here that the United States is the best market for the cheap grade of guns, and there is a double-barreled gun called at Liege the "American."

It is estimated that in the Province of Liege about 150,000 pairs of gun barrels were manufactured during the year 1902, part of which were sent to the United States rough bored, to be finished there. The exportation of gun barrels of all grades to the United States is increasing.

Quite a controversy is on here as to the better quality of gun barrel—the Damascus or the steel. The Damascus is manufactured only at Nessonvaux, near Liege, while the steel barrel is made in Liege. One argument in favor of the Damascus barrel is that in case of an explosion there is less liability of injury than with the steel barrel. Muzzle-loading guns are sent in large quantities to South America, while the flintlock is made for export to Africa.

The rifle barrel manufactured here is not exported to the United States in great quantities, on account of the duty thereon.

Revolvers are turned out in great numbers and are shipped to all parts of the world. It is estimated that 600,000 were manufactured in Liege last year.

During the six months ended August 31, 1903, there were exported to the United States firearms to the value of \$234,815.71 and gun barrels to the value of \$39,012.33.

JAMES C. McNALLY, *Consul*.

LIEGE, BELGIUM, *October 5, 1903.*

METAL-WARE TRADE OF BULGARIA.

(From United States Consul-General Hughes, Coburg, Germany.)

From official German sources a very interesting report is given out regarding "competition in the North Bulgarian metal market," the particulars of which will be of interest to the manufacturers of all kinds of metal ware in the United States. It runs about as follows, the prices throughout being those which prevailed in 1902:

The iron production of Bulgaria, the center of which is Samokow, has largely given way before European competition, while the once rather extensive manufacture of various kinds of ironware, as carried on at Stara Sagora, Sliwno, and Gabrowo, has decreased until at present only tools of a very simple nature, like knives, scissors, yataghans, chains for animals, ploughshares, etc., are manufactured, foreign raw iron being principally used for these articles. The home industry produces also in some perfection copper caldrons and tin vessels made from foreign raw material. Recently an Armenian has started an iron foundry at Rustschuck. With the help of German workmen, iron fly wheels and other iron parts for mills are manufactured there, and these goods are much in demand all over northern Bulgaria. Importers of iron and metal ware describe the iron market of North Bulgaria as follows:

Raw iron in blocks is furnished by England; soft iron, by Sweden. Of iron in bars about 40 per cent comes from Hungary and 20 per cent each from Germany, Belgium, and Sweden. The German quality is considered better than the others, and Bulgarian business men interested in this line of trade think that if the German manufacturers made special efforts they would be able to beat out their Hungarian competitors in the North Bulgarian market, although the cost of transportation of the German goods is much heavier than on the Hungarian. The average price, free at Galatz, is \$2.90 per 220 pounds.

One-half of the supply of iron beams is furnished by Germany and 25 per cent each by Austria-Hungary and Belgium. Factories in German Alsace furnish the so-called "normal profiles" in particular. Average price, free at Galatz, \$3.09 per 220 pounds.

Of iron rules, squares, and hoop iron, 70 per cent is furnished by Germany and 30 per cent by Hungary. The German goods, owing to their better quality, have almost ousted the Hungarian products.

Germany supplies 60 per cent of the coarse sheet metal, iron plate or tin, and Hungary 40 per cent. Average price, free at Galatz, \$3.47 per 220 pounds. Of lamarina sheets 70 per cent comes from England, 20 per cent from Belgium, and 10 per cent from Germany. The products of Germany would make more rapid progress on the North Bulgarian markets if they were more energetically pushed. Galvanized and lead-covered sheets are furnished by England only. Of tinned plates 80 per cent is imported from England and 20 per cent from Belgium. American manufacturers should find it worth their while to compete for the trade in these goods. Average price of tin plate, free at Galatz, \$3.28 cents per case of 45½ kilograms (100 pounds).

Of steel in bars 50 per cent comes from Belgium, 35 per cent from England, and 15 per cent from Germany. Steel for springs and steel axles for vehicles are furnished by Austria exclusively. For these two articles American manufacturers should be able to compete.

Tin is imported from England only. Average price of tin (mark, "Lamb Flag"), \$67.55 per 220 pounds in 1902.

Of lead, in blocks and tubing, 70 per cent was furnished by Italy and 30 per cent by Germany. For delivery at Galatz, Italian lead costs, on an average, \$6.56 per 220 pounds.

Copper is furnished exclusively by England. Average price of the brand "Rio Tinto best selected," \$316.32 per ton, free at Galatz, in 1902.

Brass in blocks and sheets comes from Austria only. Brass pipes are furnished by England and Austria in equal quantities.

Iron bedsteads are purchased from English manufacturers only. German manufacturers have made no effort to compete so far.

Iron stoves come from Germany (mark, "Germania") and petroleum stoves from Sweden (mark, "Primus"). Lately Berlin manufacturers who make this class of goods as a specialty have started to compete with the Swedish manufacturers. Here the superiority of American manufactures ought to and would tell if they were introduced.

Of the importation of enameled ware, Austria-Hungary has a share of 70 per cent, Germany of 25 per cent, and Holland of 5 per cent. Part of the German goods are reported by experts to be as yet of a very inferior quality to those made in Austria-Hungary.

Of locks of all kinds, 80 per cent is furnished by Germany and

20 per cent, mostly better-class door locks, by Austria. Of the importation of all kinds of ironwork for building purposes, Germany has secured 50 per cent and Austria and France 25 per cent each. Here is surely a field for the superior American goods of this class. Cast-iron door handles, sneckets, simple locks, etc., come from Germany only. Of rolled black door fittings 50 per cent is imported from Germany and 25 per cent each from Austria and Hungary. Here, again, American manufacturers should come to the front. Unpolished hinges and window hinges are furnished by Germany, the latter by Remscheid. Cast-iron and yellow-metal armatures for boilers and steam engines come from Germany and Austria in equal quantities.

Wire and wire nettings come, for the greater part, from Germany. Hungary furnishes about 70 per cent of the supply of wire tacks and Germany, the United States, Belgium, and Roumania supply the rest.

It is to be regretted that American manufacturers make no effort to capture these Balkan markets in these specially American lines.

Half the supply of knives, scissors, knives and forks, and razors comes from Germany, the other half from England and France.

Tools are furnished principally by Germany (Remscheid, Alsace). Plane irons, chisels and mortise chisels, screw taps, drills, nippers, hammers, hatchets, and axes come from Germany almost exclusively. The United States should lead in these lines. Files are furnished by Austria (mark, "Fischer") and Germany. Of hay and manure forks, 60 per cent comes from Austria-Hungary and 40 per cent from Germany. Spades are imported from Germany and Belgium in about equal quantities; scythes and sickles come from Austria alone.

England—Birmingham, in particular—furnishes 75 per cent of the steel pens; the remainder comes from Germany (20 per cent) and Austria (5 per cent). Not an American steel pen is to be found in Bulgaria.

Of sewing needles, 60 per cent comes from Germany and 40 per cent from England. England furnishes best qualities only.

Fifty per cent of the supply of tinware comes from England, 20 per cent from Belgium, and from Germany, Austria, and Roumania 10 per cent each. England furnishes tin buckets and tubs in particular, and ice boxes come from Germany and Austria.

In the importation of britannia, nickel, and alfenide ware, Germany participates with 50 per cent, Austria with 30 per cent, and England and Roumania together with 20 per cent.

From Germany, 75 per cent of the gold and silver ware is imported and from Austria 25 per cent.

It is strange that American manufacturers have never tried for this not large but still remunerative market of Bulgaria, whose ruler and people are so well disposed toward the United States.

OLIVER J. D. HUGHES,
 COBURG, GERMANY, *November 20, 1903.* *Consul-General.*

AGRICULTURAL COOPERATION IN DENMARK.

(From United States Consul Frazier, Copenhagen, Denmark.)

In her book entitled "Danish Life in Town and Country," recently published, Mrs. Jessie Brochner, of Copenhagen, devotes a very interesting and instructive chapter to the subject of agricultural cooperation. Some significant figures are presented to show the great influence which agricultural cooperation has had in the development of Denmark's export trade. Mrs. Brochner states that cooperative dairying is directly responsible for an increase in the value of Danish butter exports from about \$5,000,000 in 1882, the date of the formation of the first cooperative dairy in Denmark, to over \$29,000,000 in 1900. Mrs. Brochner adds:

This vast increase has been brought about both by the increase of production and by the marked improvement in quality, which is placed at something like 30 per cent, and without which Danish butter would have secured nothing like its present privileged position. * * *

The first Danish cooperative dairy dates from 1882. Now there are 1,057 cooperative dairies in Denmark, comprising some 140,000 members and receiving milk from 850,000 cows, or more than four-fifths of the total number of cows. * * *

Next in importance to the dairies come, within the cooperative movement, the bacon factories. These are five years younger than the dairies, and their course has perhaps not been quite so smooth as that of the latter, the conditions under which bacon is sold in the English market being less direct and less under the control of the producers than is the case with butter. Still, the cooperative bacon factories have undoubtedly tended greatly to increase the farmer's revenue from his pigs, and one just erected is the twenty-seventh. * * * The Danish cooperative bacon factories now have about 65,000 members, and last year they killed 636,000 pigs and 10,000 head of cattle, amounting in money to \$10,570,000, the price received for bacon in the English market averaging 4 cents per pound above the average price of bacon from other countries. * * *

The third of the three staple articles of food which Denmark exports—eggs—was the last to come under the beneficial influence of cooperation and had to wait another ten years before there was any question of "cooperative eggs." In 1895 a Danish cooperative egg-export society was started and it has now about 30,000 members under obligation to collect the eggs, which are all stamped every day, with a view to their being taken to the district centers. Last year cooperative eggs were sold in England to the value of about \$1,606,000, and greatly owing to the influence of this movement the value of exports of eggs from Denmark has risen from \$1,947,000 in 1895 to more than \$4,380,000 in 1901, Danish eggs now averaging about 6 cents more per score (3.6 cents per dozen) in the English market

than other foreign eggs. If Denmark during last year had received the same average price in the English market for her produce as did other foreign countries she would have been \$1,766,000 poorer on her butter, \$4,329,000 poorer on her bacon, and \$1,071,000 poorer on her eggs. * * *

The love of cooperative enterprise in Danish farmers is, however, by no means confined to a rational handling of their produce, but has manifested itself in many other directions, as, for instance, in large organizations for buying and distributing cattle food and artificial manures. They also do a portion of their own insurance and have for some time been thinking of starting their own bank. In addition to the institutions of strictly agricultural origin the farmers support almost the whole of the general cooperative movement of the country, as it is known in England and elsewhere, a state of affairs exactly the opposite to what is the rule in other countries. In the year 1898 there were in the city of Copenhagen seven cooperative societies out of a total of 837 in the Kingdom. All the others were in the country. * * * The aggregate number of members of the various Danish cooperative institutions exceeds 400,000 and the aggregate value of the annual exports of cooperative butter, bacon, and eggs amounts to 178,000,000 kroner (\$47,704,000).

The export prices of butter and bacon were higher in 1901 than at any time since the early eighties. The following table shows the average export prices of butter, bacon, and eggs in various years since 1880:

Year.	Butter (per pound).	Bacon (per pound).	Eggs (per dozen.)
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
1880.....	25.3	9	.....
1890.....	21	10	.....
1900.....	23.6	11.3	.....
1901.....	23.9	12.3	18
1902.....	23.3	12.1	18

R. R. FRAZIER, *Consul.*

COPENHAGEN, DENMARK, *November 14, 1903.*

EUROPEAN COMMERCIAL ITEMS.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

Germany, during the first nine months of this year, exported bicycles to the value of \$4,046,000, showing an increase of more than 100 per cent as compared with the exports for the same period of 1901. Nearly one-fifth went to Holland. In 1902, Holland had 159,120 bicycles in use. The sale of bicycles has continually increased in the Netherlands during the last few years. Our manufacturers and exporters should direct their efforts thither. It is well worth a thorough canvass by United States commercial travelers.

Efforts are being made to revive the former system of levying tonnage dues on vessels plying on the River Rhine. The Chamber of Commerce of Cologne has memorialized the Imperial German

Government protesting against such efforts, declaring the collection of such imposts to be injurious to commerce, manufactures, and agriculture.

Austria's export of barrel staves has been rapidly decreasing, owing to the competition of the American staves. In 1892 there were 69,000,000 Austrian staves shipped from the ports of Trieste and Fiume alone; in 1902, only 31,750,000 staves; and for this year the shipments are estimated at 10,000,000 staves; whereas Europe received from the United States 48,000,000 staves in 1902.

According to a statement published by the Department of Mines at St. Petersburg, the exports of Russian platinum in the year 1901 amounted to 14,055 pounds; 284 pounds were used by two establishments in Russia.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *November 14, 1903.*

EUROPEAN FLAX MARKET.

(From United States Consul Muench, Plauen, Germany.)

I take the liberty of again calling the attention of our agricultural communities to the state of the flax market in Europe, and to impress the advantages which it obviously affords for profitable cultivation of flax fiber in the United States.

An unprecedented shortage of this year's flax crop in Russia has led not only to a sort of corner in the raw material, but to a perfectly natural advance in its prices, amounting, since October 1, to about 25 per cent. So seriously is this rise felt that far-reaching limitations in linen production have already been determined upon, and unless the needed supply shall be obtainable elsewhere these limitations must remain imposed for an indefinite time.

Not only does Russia furnish more than 80 per cent of the present vast quantities of flax utilized in the linen-textile districts of Germany, but England and Scotland likewise draw upon that market for raw material. It is now known that owing to early and phenomenal snows fully one-third of this year's crop of Russian flax has been ruined, and the residue is totally insufficient to supply even present demands. This occurrence was followed by an immediate and sharp rise in the market; but even at these advanced figures practically the whole crop has passed into the control of a few persons.

Undoubtedly the shortage is such that it can not be made good even by a successful Russian crop in 1904, and a further argument has therefore arisen, beyond those heretofore urged, why our farmers whose soil is suitable for flax culture should turn their attention to this most important staple.

Persons can undoubtedly be found in almost every locality who have sufficient familiarity with the processes of retting and swin-gling, and each community of producers could have the raw fiber treated at some central plant, upon the principle now followed in cases of creameries, etc.

Europe is eagerly hoping for some fresh source of supply beyond the insufficient and oftentimes unsatisfactory Russian market.

HUGO MUENCH, *Consul*.

PLAUEN, GERMANY, *December 4, 1903.*

SILK MARKETS OF EUROPE.

(*From United States Consul Hossfeld, Trieste, Austria.*)

A recent number of *L'Economiste Français* contains some interesting information concerning the relative importance of the various silk markets of Europe. Up to 1899 Lyons maintained the first place; but in the last year of the old century its rank was taken by Milan, in whose magazines were stored in 1900 no less than 7,223,525 kilograms (15,924,988 pounds) of silk, or 1,211,762 kilograms (2,671,455 pounds) more than in Lyons, whose total receipts were only 6,011,763 kilograms (13,253,533 pounds). The year 1901 increased the disparity between these rival markets. The receipts of Lyons rose, but only to 6,874,649 kilograms (15,155,971 pounds), while those of Milan reached 8,697,490 kilograms (19,175,702 pounds). In 1902 the receipts of Milan leaped to 9,849,350 kilograms (21,714,096 pounds) and were 37½ per cent larger than those of Lyons, which aggregated only 7,165,118 kilograms (15,796,423 pounds).

The permanent preeminence of the metropolis of Lombardy as a silk market now seems assured. It should be borne in mind, however, that Milan's gain is largely due to the fact that a considerable number of the leading silk firms of other countries have established branch houses there. The claim is made by the Lyon's Board of Trade that a very large portion of Milan's silk business is transacted by French firms, and that of the total silk business of the world, which amounts to about 18,000,000 kilograms (39,683,200 pounds), Lyon's firms do fully one-half.

As compared with the two cities mentioned, the other European silk centers are of minor importance. Zurich holds the third place, with 1,571,301 kilograms (3,464,103 pounds); St. Etienne the fourth, with 1,200,242 kilograms (2,645,525 pounds); and Turin the fifth, with 645,427 kilograms (2,363,355 pounds).

FREDK. W. HOSSFELD, *Consul*.

TRIESTE, AUSTRIA, *December 4, 1903.*

FOREIGN COMMERCE OF FRANCE.

(From United States Consul Haynes, Rouen, France.)

Compared with former years the commerce of France is increasing, but compared with the progress being made by other nations it is stationary. During the first nine months of the present year (1903) the imports amounted to \$664,913,757, an increase of \$37,835,141 over the corresponding period of 1902. These imports were: Food products, \$124,752,691, an increase of \$11,194,000 over last year; material for industry, \$424,494,236, being \$21,815,176 more than in 1902; and manufactured goods, \$115,666,830, an increase of \$4,702,059 over the same months in 1902.

Exports during the first nine months of 1903 amounted to \$599,131,444, an increase of \$730,119 over the corresponding period of 1902. These exports were: Food products, \$87,572,206, a decrease of \$9,306,846 as compared with last year; material for industry, \$170,065,231, being \$4,458,686 more than in 1902; manufactured goods, \$304,143,296, an increase of \$1,665,397 over the previous year; and exports by postal package, \$37,350,711.

THORNWELL HAYNES, *Consul.*

ROUEN, FRANCE, *October 30, 1903.*

COAL TRADE OF NANTES AND ST. NAZAIRE.

(From United States Consul Ridgely, Nantes, France.)

At Nantes and St. Nazaire about 1,500,000 tons of coal are imported annually for the region of the lower Loire. In 1900 and 1901 United States exporters sent several cargoes of steam coal to St. Nazaire, and it was hoped at that time that American coal had come to stay. On the other hand our exporters abandoned the enterprise in the spring of 1902 and since that time no American coal has reached this market. Until last year the United Kingdom controlled at least four-fifths of this coal trade, but during the latter part of 1902 representatives of German collieries appeared upon the scene and began to bid for business. The results up to date have not been very reassuring to the British exporters, as the Germans have not only captured some of the best contracts for 1903, but have in several instances proved the superiority of their steam coal. The lower wages paid German miners and the low water carriage direct from the collieries via Rotterdam to Nantes make it apparent that the United Kingdom must hereafter expect to divide this business with Germany.

It is pretty well understood that the several English and French coal companies working this market have an agreement as to maintaining prices, and in so far as this agreement applies to stove and grate coal it is thought the Germans will not undertake to disturb it. A singular feature of the present situation is that the German collieries are represented here by a French company, and that the French company in question is in the Anglo-French syndicate above referred to. Perhaps the Germans are in the trust without being aware of it.

United States exporters do not seem inclined to take the only step that could gain them a permanent place in this market, viz, to establish a coal yard here and keep at least 10,000 tons of steam and stove coal constantly on hand, with a practical and active local coal broker in charge of the business.

BENJ. H. RIDGELY, *Consul*.

NANTES, FRANCE, *October 1, 1903.*

COTTON MILLS OF FRANCE.

(*From United States Consul Haynes, Rouen, France.*)

France possesses no less than 6,150,000 spindles, of which the three principal cotton-manufacturing regions—Normandy, Nord, and Vosges—have 1,750,000, 2,200,000, and 2,100,000, respectively. Last year these spindles consumed 165,000 tons of cotton from the United States, 23,000 tons from Egypt, and 17,000 tons from India.

The progress of French weaving has been as regular and rapid as that of spinning. It was only in 1872 to 1875 that the first mechanical looms for the manufacture of colored goods were operated in this country. At present the number of looms manufacturing both bleached and colored goods is estimated at about 106,000, of which Normandy has 27,000, Vosges 56,000, and the region of the Rhoane 15,000. Previous to the tariff of 1892 the number of looms in France was barely 75,000.

There are few complete mills in this country, spinning being done in one establishment and weaving in an entirely different one. Moreover, the mills are small and to some extent handicapped by a lack of water power. The laws also bear heavily upon the industry, and while French manufacturers do not like to complain of the regulation of the hours of work by the Government, nor of the laws of hygiene, the security of the mill, etc., still they dread the extent to which these laws may be carried. One of the most prominent manufacturers of Rouen remarked recently: "In a few more months the legal hours of work will be less in France than in any other

country of Europe." To these local hindrances must be added the great one common to all the cotton-goods-manufacturing countries of Europe. A large part of the cotton consumed in Russia comes from Turkestan and Afghanistan; Africa and Asia furnish England; Togo and Kamerun, Germany; and, lastly, France turns to the Sudan, Kongo, Madagascar, Tonkin, and Indo-China. Of all the manufacturing nations, the United States alone grows the raw material, and this is the reason why France and all other European countries must eventually suffer in the world's markets from the competition of United States cotton goods.

France depends greatly upon her colonies for marketing her goods. Ninety-four per cent of the cotton cloth entering Madagascar last year was of French origin. The situation is the same in Indo-China, where in less than eleven years the amount of French goods entering has increased from \$500,000 to \$3,200,000. Algeria, however, takes more than any other colony, the amount last year being over \$6,000,000, of which Rouen furnished the greater part.

THORNWELL HAYNES, *Consul*.

ROUEN, FRANCE, *October 30, 1903.*

ALCOHOLISM IN FRANCE.

(*From United States Consul Atwell, Roubaix, France.*)

The necessity of checking the growth of alcoholism in France is deeply felt in the Republic, and a congress was held in Paris in October to deliberate upon means to eradicate this evil.

Eminent men of letters and the clergy of different denominations united their efforts in this congress to work for the common interest of the nation.

On October 28 the Antialcoholic Congress adopted the following resolutions:

That the number of saloons shall be restricted by law; debts for liquor sold by the glass shall not be legal; that the proprietor of a saloon shall be held responsible for crimes committed by a person or persons who have become intoxicated in his saloon; that the court shall declare the forfeiture of paternal authority in all cases where habitual drunkenness shall have been proved; that prefects shall exercise more frequently the right conferred upon them by the law of April 5, 1884, to close saloons.

A spur was doubtless given to the present widespread endeavor to combat the increase of alcoholism by the fact that a company controlling unlimited capital has been formed recently in France to furnish so-called "aperitifs" at a price defying competition.

The feeling with regard to the peril of France was voiced by Dr. Debove, dean of the medical faculty, in his opening remarks

before the National Antialcoholic League at a meeting held in Paris during the latter part of October. He spoke as follows:

I gladly accept the honor of presiding over your meeting. In the face of the peril which menaces us no one has a right to refuse his support, for we have the disgrace of ranking first among alcoholic nations.

Official statistics bear witness to the unfortunate truth of this statement. France has 464,556 saloons to supply the wants of 38,666,366 inhabitants. That is 1 saloon to 83 inhabitants, and this number is constantly increasing.

The following table, showing the annual quantities of alcohol consumed per capita in the several countries, places France at the head of the list:

Country.	Consumption per capita.	
	Liters.	Gallons.
France.....	18.21	4.81
Switzerland.....	12.5	3.3
Belgium.....	10.42	2.75
Italy	10.23	2.7
Denmark	10.21	2.69
Germany.....	9.25	2.44
England	8.91	2.35
Austria.....	8.59	2.26
Holland.....	6.9	1.74
United States.....	5.19	1.37
Norway.....	2.6	.69
Finland	2	.53
Canada	1.94	.51

During the past ten years the consumption of alcohol in France has increased in alarming proportions, while England and the United States have progressed toward temperance.

Liverpool has closed one-third of its saloons during the past ten years and so decreased her police force in consequence as to have made an economy of \$40,000 yearly.

Sweden and Finland have also made marked progress in temperance. In 1829 Sweden had 1 saloon to every 100 inhabitants, and the consumption of pure spirits was 23.35 liters (6.17 gallons) per capita; in 1900 she had but 1 saloon to 5,000 inhabitants, and the consumption had fallen to 4.97 liters (1.31 gallons) per capita.

In 1850 Finland had 1 saloon to every 100 inhabitants and consumed 20 liters (5.28 gallons) per capita; in 1900 the consumption was but 2 liters (a fraction over half a gallon) per capita, and there was but 1 saloon to every 9,000 inhabitants.

In order to compete with Sweden and Finland, France will have to close nine-tenths of her saloons, and it is with this end in view that the French press is exhorting the nation to temperance.

The general abstemiousness of the people is now regarded as one of the principal causes of the increasing commercial supremacy of the United States.

W. P. ATWELL, *Consul*.

ROUBAIX, FRANCE, *November 4, 1903.*

GRENOBLE INDUSTRIES AND EXPORTS TO THE UNITED STATES.

(*From United States Consul Nason, Grenoble, France.*)

CONSULAR DISTRICT OF GRENOBLE.

While within this consular district are the Departments of Savoy and Upper Savoy, embracing in the latter as its chief city Annecy, and in the former Chambery and the famous watering place of Aix-les-Bains, the largest and most important Department in size and population is the Department of Isère, having for its chief city Grenoble, often called "the capital of the Dauphiny." Here is not only the center of the governmental, military, and university life, but of the commercial and industrial interests of the region. There exists, in consequence, a chamber of commerce, which issues reports from time to time, and which in the past year has installed itself in a handsome building of its own, containing an assembly hall, a special library, and various public and private rooms.

From the two Departments of Savoy and Upper Savoy are exported to the United States increasing quantities of chlorate of soda and potash, ferrosilicon, chrome and molybdenite, marble and stone, alimentary pastes, furniture, and now and then a chime of bells (from Annecy).

Beyond the traditional agricultural and dairy products, sheep raising, etc., of these mountainous regions, new industries are springing up under the auspices of the rapidly developing hydro-electric power, and coming years will doubtless witness much transformation in the heretofore tranquil and sparsely populated valleys and hillsides of the Savoy Alps.

INDUSTRIES AND PRODUCTS.

Glove industry and trade.—The general low trade condition in France in the past few years has affected the Grenoble glove industry to a considerable degree. Where in 1898 there were 75 independent glove factories or makers, there are now but 66. Yet the number of men and women engaged in the industry in one form or another has not sensibly declined—25,000 being the estimate in and

around Grenoble. The wages paid range from \$1 to \$1.20 for men and from 40 to 60 cents per day for women.

The output has fallen from 900,000 dozen pairs in 1898 to 800,000 dozen pairs in 1901. This decrease is due in part to the increasing use of thread and other material than kid and lamb skin for gloves, and still more to the increased fabrication of gloves in Italy, Germany, Belgium, and especially in the United States, one of the principal outlets for French gloves. The value of leather gloves made in the United States in 1900 was estimated at \$16,721,234, as against \$7,000,000 approximately in 1880. The high tariff on men's gloves and the fact that they are now well made in the United States have restricted the exportation mostly to women's gloves, which, as made in France, are of superior quality and finish.

The exports of gloves from all France to the United States show a continual decrease, as will be seen from the following figures:

Year.	Value.	Year.	Value.
1895	\$3,500,759	1899	\$1,795,102
1896	2,473,121	1900	2,018,973
1897	1,972,267	1901	1,281,713
1898	2,118,468	1902	1,031,778

The exports through this consulate direct are thus represented:

Year.	Value.	Year.	Value.
1895	\$1,439,087.30	1900	\$863,053.11
1896	1,166,987.87	1901	849,158.36
1897	994,098.14	1902	856,831.57
1898	670,076.16	1903	835,550.98
1899	802,418.30		

Additional shipments of Grenoble gloves via Paris and London would increase the above sums by a considerable percentage.

Metal buttons.—A factor not inconsiderable in glove making is that of clasp or press buttons, invented and manufactured by a firm of this city, which also controls the patent. This industry, of which there are six factories in the Isère, finds important outlets in all Europe, in America, and in Japan. Competition is developing in Germany, Austria, Italy, Belgium, England, and the United States, but the superiority of the Grenoble work gives it a continual prosperity, especially as this form of clasp button is used extensively in many other industries (leather work, boots, shoes, etc.).

Walnuts.—The second commodity in importance passing through this consulate for the United States is walnuts. These nuts, familiarly known as "Grenoble walnuts" and unsurpassed in quality,

especially the "Chabers" and "Mayettes," as table nuts, are grown for the most part in the fertile valley of the Graisivaudan. Beginning at the town of Tullins, 20 miles from Grenoble, the nut region proper extends through the valley and along the side hills to St. Marcellin, covering an area of 15 miles in length by 8 miles in breadth.

The business is done chiefly with houses in New York, Boston, Chicago, and Philadelphia by nut merchants, who, living in the nut region, buy of the growers and collect the nuts for packing and shipping, often into storehouses with modern facilities for airing and drying.

Outside speculators often play an important part in controlling prices. These prices vary from year to year, according to the quantity and quality of the crop and other fluctuating factors, from 50 to 90 or even 100 francs per 100 kilograms (\$9.65 to \$17.37 or \$19.30 per 220 pounds). In 1902 the price ruled exceptionally high, touching 110 francs (\$21.23), a disastrous hailstorm in September destroying in thirty minutes nearly one-third of the maturing crop. This year (October, 1903) opening prices are about 80 francs (\$15.44) delivered in New York. The crop of unshelled nuts for shipment averages from 30,000 to 40,000 bales of 100 kilograms each (6,600,000 to 8,800,000 pounds) of "Mayettes," and about 25,000 cases of shelled nuts, "Chabers," of 25 kilograms to the case (1,375,000 pounds). The prices of the latter range from 150 to over 200 francs (\$29.95 to \$38.60) per 100 kilograms (220 pounds). Hundreds of small farmers and their families are occupied throughout the late fall and winter in breaking and shelling these nuts.

The total yield of nuts in the Isère for 1901 was 12,651,097 pounds, valued at \$418,669, one-third less than an average crop.

The shipments to the United States through this consulate for five years ended June 30, 1903, were as follows:

Year.	Value.	Year.	Value.
1899	\$127,539.08	1902	\$266,049.73
1900	140,121.33	1903	204,736.34
1901	280,432.02		

The decrease noticeable in 1903 was caused by a considerable percentage of the nuts passing through other consulates.

Photographic paper.—One only of the 35 paper-making factories in the Isère—the old and extensive establishment at Rives—exports to the United States. The amount of this paper, used mostly for photographic purposes, varies little from year to year. A recent slight falling off in total values is due to reduction in the price.

As showing a tendency to accept any marked American improvement, a plant for the making of paper-mill machinery—also at Rives—has recently contracted with an American inventor for the control of a patent covering a machine for the quicker and more economical drying of paper.

C. P. H. NASON, *Consul*.

GRENOBLE, FRANCE, *November 2, 1903.*

LIMOGES PORCELAIN AND CHINA WARE.

(From United States Commercial Agent Griffin, Limoges, France.)

The leading industry of this consular district is porcelain, and the past year has been one of the most successful in the history of the ceramic art in Limoges.

The disposition of the output remains practically the same, viz, five-sixths is exported to the United States. There is hardly another city in Europe where American capital is so extensively invested in its industrial output as in Limoges. All shapes, designs, and decorations are gotten up for the market of the United States; every fluctuation and change in that country are carefully noted and felt here.

There is a gradual change taking place in the styles of decorations—decalcomania, which superseded hand painting as a cheap method of decorating some years ago, is yielding by degrees to higher and more artistic styles; soft underglaze colors are so applied as to produce fine effects, and it is probable that very soon the leading styles of the best class of goods will be decorated in this manner.

A few changes have been made in the construction of the kilns, and many scientific experiments are being made in some factories, but the practical results have not sufficiently developed yet to guarantee success.

The demand in the United States for hard china, free from lead glazes, is ever increasing. Careful hygienic examinations by experts are made every year on the factory conditions, employees, methods, etc.

The past year has been exceptionally free from strikes and labor troubles; work has been carried on smoothly and successfully, and orders have been filled with a relative degree of promptness. Fewer goods, however, have been exported to foreign countries than usual, the United States excepted. Every year shows that Limoges is more and more dependent upon the American trade, and if American porcelain factories were able to supply the domestic trade it is

certain that the kilns of Limoges would remain unfired. Nearly every Limoges manufacturer has an agent in the United States, and most of the manufacturers have houses in New York.

WALTER T. GRIFFIN,
Commercial Agent.

LIMOGES, FRANCE, *October 28, 1903.*

INTERNATIONAL EXPOSITION AT NANTES.

(From United States Consul Ridgely, Nantes, France.)

An important industrial and agricultural exposition is to be held in this city during the year 1904, beginning the 5th of May and ending the 22d of September. The exposition is to be international in character and is to comprise four great sections, viz, agriculture, industry, marine, and fine arts.

It will be held on the large natural drill grounds sloping back from the left bank of the River Loire and covering many acres of ground excellently situated for the purpose. Nantes is the center of one of the greatest agricultural and industrial regions of France. It is a seaport on the River Loire some 30 miles above the mouth of the river, with a population in the city and suburbs of about 180,000; it lies about 250 miles southwest of Paris and 200 miles north of Bordeaux and has abundant facilities for transportation both by sea and land.

The opportunity will be an excellent one for the display of all sorts of American products, and more particularly for those of an agricultural and mechanical character. American hardware, farm implements, windmills, and, in fact, all articles of an exportable character might well be displayed here.

One of the features of the exposition will be a display of automobile boats, and these boats are to be tried in a series of races on the Loire between Nantes and St. Nazaire.

American products for display can be shipped direct to Nantes in bond and will be entered free of duty. Those that are sold here, however, must of course pay the regular customs duties. The unsold products may be returned free of all customs charges to the United States.

The price for space has been fixed at 25 francs (\$4.82) per square meter (35.316 square feet) for machinery and implements and 40 francs (\$7.72) per square meter for all other products.

Americans desiring to display may address either the mayor of Nantes, this consulate, or M. Jean Alfred Vige, administrateur de l'Exposition Internationale de 1904, 1 Place Royale, Nantes.

This exposition is the only one to be held in France in 1904 and the progressive and energetic city of Nantes intends to make it memorable in the commercial history of the important region of which the city is the metropolis.

Automobile boats, which are relatively so cheap in the United States, might well be introduced into France, and this feature of the exposition should not be overlooked by constructors of naphtha, gasoline, and other small automobile craft.

If American windmills are to be introduced into France a better opportunity for showing them could not be chosen than this exposition.

Gold, silver, and bronze medals are to be awarded for the best displays.

BENJ. H. RIDGELY, *Consul*.

NANTES, FRANCE, *December 9, 1903.*

CONGRESS OF GEOGRAPHICAL SOCIETIES AT ROUEN.

(From United States Consul Haynes, Rouen, France.)

Last August the National Congress of Geographical Societies met in Rouen. All the important cities of France were represented, as well as the royal geographical societies of London and Madrid and the society of Geneva. The following is condensed from a lecture given by M. Monbrun, of Oran, on Algeria:

PRODUCTS AND COMMERCE OF ALGERIA.

The general commerce of this, the "pearl of France's colonial empire," amounted to \$1,351,000 in 1830; to-day it is more than \$115,000,000. In 1901-2 there were sown 7,413,000 bushels of cereals, yielding 2,200 tons of grain. The hard wheat of Algeria is said to be the best in the world for the manufacture of pastes, while its barley is much sought after by brewers. The vineyards continue their marvelous development. In 1871 they covered hardly more than 24,000 acres; in 1881, some 74,000 acres; in 1895, about 190,267 acres; and at present, more than 432,000 acres. The yield of wine, which was 2,232,236 gallons in 1871, exceeded 147,935,000 gallons in 1900. The commerce of fruits and vegetables is extending very rapidly, advantageously competing in France with those from Spain, Italy, and Egypt. The exportation of these in 1899 amounted to 5,000 tons, since which time the amount has doubled. In 1901 there were exported to France 1,500,000 head of cattle. Algeria has enough phosphates to supply the whole world for a long time. Petroleum has been found in the Province of Oran. The population has doubled in twenty-two years.

TUNNELING THE ALPS.

Another important subject discussed at the congress was the Simplon Tunnel. This is a work of vital interest to France, Italy, and Switzerland. The opening of the tunnel will directly connect

the English Channel and Adriatic Sea, and be of distinct value to the port of Rouen. The Alps have already been pierced by two tunnels—the Mont Cenis and the St. Gothard. The latter presented great difficulties and cost \$13,510,000, which was paid by Italy and Germany. The digging of the Simplon was decided upon by Italy and Switzerland, the two countries voting \$15,054,000 to carry out the work, which began November 18, 1898, to be finished within five years. The length of the tunnel will be a fraction over $12\frac{1}{4}$ miles. Work is executed at the same time on both the Italian and Swiss sides. M. G. Goegg, of the Switzerland Geographical Society, who gave a lecture on the Simplon, described minutely the machines used, and remarked that at present great difficulties are experienced on account of the immense amount of water encountered in the tunnel. A new plant of machinery had to be installed to dispose of this water, and as a result of the additional expense the contractors have asked an indemnity of the two Governments, but as yet no response has been received. Up to last June 10 miles of the work had been finished.

The digging of the Simplon has much to do with the commercial future of France. In all probability either the line of Lons-le-Saulnier-Geneva by St. Claude or the line of La Faucille will be constructed within a few years. The latter, by the tunneling of La Faucille, will give a much shorter route from Paris to Lons-le-Saulnier by the way of Dijon and St. Jean-de-Losne; in fact, a shorter line between Paris and Geneva could not be found. It would reduce the present time between the two cities by three hours, as well as, of course, the time from Paris to Italy, giving the shortest and quickest route between England, Milan, and Brindisi. Naturally, mail for India would go this way. It is the only route to compete with the St. Gothard Tunnel, and has been urged in France since 1900 by the Congress of Syndicated Chambers and the majority of the chambers of commerce.

FRENCH WATER WAYS.

The congress also adopted the following resolutions concerning the water ways of France:

1. That the project of bettering the water ways adopted by the Senate be presented as soon as possible to the Chamber in order that work may be begun at the earliest possible moment.
2. That the Government study the project of a grand navigable water way from Nantes to the Saône.

THORNWELL HAYNES, *Consul.*

ROUEN, FRANCE, *October 30, 1903.*

PRODUCTS AND TRADE OF CORSICA.

(From United States Consular Agent Damiani, Bastia, Corsica.)

MINERALS.

In submitting my annual report, I invite the special attention of American capitalists to the great and undeveloped mineral wealth of the island of Corsica. Mines of all kinds exist, but the methods of exploitation are ancient and incapable of realizing their immense possibilities. Quarries producing the finest marble in the world are in operation, but a great deal of this marble is shipped first to Italy, where it is bought by dealers and thence exported to buyers in the United States. It would certainly be greatly to the advantage of American importers to deal directly with this island.

CORK.

The total production of cork in Corsica amounts to many millions of pounds. Here, again, the American importer buys in the dearer market, seeking the Corsican product in Spain, Portugal, and France, while it could be furnished to him here on the spot at a much cheaper price.

CITRONS.

The citron of Corsica is justly renowned for its quality. The crop of 1903 amounted to 5,500,000 pounds. Prices to growers will be from \$4.63 to \$5.79 per 100 kilograms (220 pounds). Packed ready for shipment citrons will cost buyers from \$6.56 to \$7.72 per 220 pounds.

OLIVE OIL.

Prospects for olive oil are very good. The estimated annual production runs from 8,800,000 to 11,000,000 pounds. Prices will range from \$13.51 to \$17.37 per 220 pounds. For this, again, American buyers are paying far higher prices by seeking the product at third hand elsewhere.

MAIL SERVICE.

The Compagnie Française de Navigation et de Constructions Navales, having been awarded the Government mail concession for the service between Marseilles, Nice, and the ports of this island, is planning to establish a service which shall surpass the present system both in comfort and speed. To this end two very fine steamers, capable of going 17 knots per hour, are under construction, and it is hoped by means of these vessels to make the crossing from Marseilles in little more than ten hours and from Nice in six hours. Very comfortable hotels are being erected here, and it is to be hoped

that these improvements will serve to induce American travelers to include this interesting island in their European tours.

IMPORTS OF THE UNITED STATES.

The following statement shows the imports at Bastia from the United States during the year ended June 30, 1903:

Article.	Value.	Article.	Value.
Wheat flour.....	\$4,960	Leaf tobacco.....	\$163,413
Coffee.....	683	Steam boilers.....	8,093
Pimento.....	381	Furniture.....	31
Household articles:		Molded works.....	529
Painted.....	388	Sewing machines.....	416
Tinned.....	69,007	Petroleum.....	156,071

SIMON DAMIANI,

BASTIA, CORSICA, *November 1, 1903.*

Consular Agent.

CONSULAR DISTRICT OF RHEIMS.

(From United States Consul Prickitt, Rheims, France.)

During June of this year I made a partial tour of my consular district through the Departments of Haute-Marne, Aube, Vosges, and Meurthe et Moselle.

TROYES CONSULAR AGENCY.

I visited Troyes and found the consular agent, Mr. Gaston Baltet, very much discouraged on account of the decline of the leading exports of his consular agency—kid gloves and hosiery—to the United States. I talked with him about undervaluations, for I had read newspaper accounts that the knit underwear imported into the United States is greatly undervalued. He replied that this could not be true as far as Troyes was concerned; that the exports of knit goods from Troyes was constantly decreasing, showing that the manufacturers at Troyes can not compete with those of the United States under the present tariff, and that it is only a question of time when the exportation to the United States of these goods will entirely cease.

BOURBON-LES-BAINS.

I stopped at Bourbon-les-Bains, in the Department of Haute-Marne. This place is noted for its hot mineral springs and is called the Weisbaden of France, because an analysis of its waters shows that they are nearly identical with those of that celebrated resort. The springs of Bourbonne are the property of the French Government, and a military hospital has been established there. The

waters, which emerge from the springs at a temperature of 152° F., contain 5 grams (one-sixth of an ounce) of salt to the quart. They are found to be excellent for bathing flesh wounds, which are rendered healthy and made to heal much more quickly. The waters are also rich in lithia and are very efficacious in rheumatism and gout. Many afflicted persons go to Bourbonne, but the place deserves to be much better patronized, and it would be if the virtues of its mineral waters were better known.

Primitive farming.—Bourbonne is in the midst of a beautiful country, with excellent roads in all directions. The soil is very fertile, but the methods of farming are very primitive. Everywhere is noted the absence of machines. Potatoes are grown in quite large quantities, but the crop is cultivated almost entirely by hand. It is doubtful if any of the native inhabitants have ever seen a potato planter or digger. The potatoes are planted so closely together that cultivation with horse implements is impracticable—consequently they are hoed. The hoes used are very heavy, have short handles, and the men and women who use them stoop painfully over their work.

The farmers say that their farms are so small that each farmer can not afford to purchase modern implements; but if the owners of several small farms would combine, purchase machines, and farm according to improved methods, a great saving of labor would be accomplished and the work would be much easier and much pleasanter. Under the present régime agricultural labor is scarce, the young people preferring to go to the cities and manufacturing towns. Land has been declining in value for years, and good farming land can be bought in the Department of Haute-Marne for \$30 an acre.

DEPARTMENT OF VOSGES.

I traversed the valley of the Moselle River, from Bussang to Epinal, a distance of 60 miles, in the Department of Vosges. It is a beautiful country. There are cotton mills in nearly every village, run partly by water.

The agricultural population do not have their houses all together as they do in the Department of Marne. In the Vosges, small farm houses dot the landscape and they look very picturesque. They are built of concrete, which takes on a light color, and their roofs are covered with red tile.

If the houses had more windows they would be much prettier, as well as much lighter and sunnier inside; but there is a tax upon doors and windows in France, so the tendency is toward having as few as possible. This is considered to be probably the reason why there are so few verandas, for these would make the interiors of the badly lighted houses still more somber. The levying of the tax is

regarded by sanitarians as a great mistake, for it acts particularly against the taxpayers with small incomes, leading them to deprive themselves of light and air.

One would think that in the country fruit and vegetables would be plenty; that fruit trees in abundance would be found around the farm houses. This is not so, for too little fruit, except grapes, is grown in this consular district. The agricultural population—the small landholders belonging to the class known as the peasantry—live on bread, cheese, potatoes, and salads, principally, and do not consume apples, pears, small fruits, and melons, which they might easily grow. Their beverage is the ordinary wine of the locality.

The meadow land along the river is admirably adapted to grass. Haying had just commenced and many men and women were working in the fields. I did not see a single mowing machine. I was told that the bottom is rough and cut up by gullies, but I am sure that nine-tenths of the ground could be mowed with machines.

The American harvest-machinery companies are doing an increasing business in their line in France each year, but evidently they have not as yet succeeded in securing much trade in the Departments of Haute-Marne and Vosges.

WILLIAM A. PRICKITT, *Consul*.

RHEIMS, FRANCE, *October 28, 1903.*

FRENCH TRADE IN THE RUSSIAN MARKET.

G. Aimey, in *Les Annales Diplomatiques et Consulaires*, says:

We are very fond of Russia, but unfortunately we know very little about it, and the little we do know does not prevent us from feeling that it will not assist us in developing that condition that should exist between the two countries relative to commercial transactions. We ought also to say that we scarcely suspected the new industrial freedom that prevails in Russia and the importance of the Russian market.

The exchange of visits, toasts, and letters is all right, but we ought to add to that a traffic of several hundred millions of rubles of merchandise, provisions, and raw and manufactured products.

We have before us three documents of a former French consul at St. Petersburg in which the facts exposed and the clear deductions and the figures themselves are eloquent.

It was urged after the last exposition at Nizhni Novgorod that many of the French industrial people—business men, financiers, and engineers—should return to do business. The fair showed the immense resources of the colossal Empire, which is a great market for foreign wares and a great field for capital.

In spite of the protective rigor with which the Empire has surrounded the development of its national production, the imports of Russia have increased. From \$193,000,000 in 1891 they went up to \$347,400,000 in 1894 and to about \$386,000,000 in 1901.

We hold fourth place, excepting in the case of wines, silks, perfumery, and millinery for hats. Ahead of us are England, Germany, and the United States; France, Austria, and Belgium follow.

In cotton goods the imports into Russia were as follows: England, 3,069,520 pounds; Germany, 1,625,040 pounds; France, 288,896 pounds.

In woolen goods imports were as follows: Germany, 5,777,920 pounds; England, 2,708,400 pounds; France, 433,344 pounds.

Russia imported from Germany musical instruments to the value of \$927,000; France hardly \$41,200. Germany exported cutlery to the value of \$82,400, while France hardly \$8,755. Surgical instruments to the value of \$618,000 were exported from Germany, while France sent only \$64,375.

What is the cause of this? It is our ignorance of foreign markets and the insufficiency of our commercial education. We follow routine methods and are inaccessible to new ideas. We strive to impose on the foreigner our plans and even our financial methods. The thing for us to do is to imitate our two most dangerous competitors, England and Germany. The latter has taken up the customs of the Russians, and although our business men estimate that it is impossible to give credit for a longer period than ninety days, Germany gives all the time necessary, whether six, nine, or even twelve months from date of sale. On the other hand it has planned not to suffer too much from a submission to commercial usages and has created agencies, counting houses, and banks, which have facilitated business transactions and diminished risks enormously. French exports to Russia will increase when French business men adopt similar methods.

The natural resources of Russia are immense. The oil basin of the Donetz, extending 16,575 miles, is one of the greatest in the world. The petroleum of Pennsylvania will be exhausted long before that of the Caucasus. The Russian production of petroleum was 8,125,200 tons, while in America it was only 4,157,880 tons.

It should be remembered, nevertheless, that it was French capital, ordinarily so timid, that financed the Russian Railway.

Among the great enterprises founded by the French may be mentioned the following:

The French Oil Company of Southern Russia; the French Steel Company of Tsaritznie (capital, \$3,474,000); the Steel Company of Douykovka (capital, \$1,930,000); the South Russian Mechanical Company (capital, \$772,000).

The French silk industry at Moscow has 2,000 looms and employs 3,000 workmen. It is the most important in Europe.

It is to be desired that this movement will continue, and if we can not find a market for our goods we are at least certain of finding a reception for our capital. Our industry will then aid Russia against foreign competition.

Results will be better if business men transact their affairs well in Poland, in the Urals, and even in Siberia.

POTATOES IN FRANCE.

(From United States Consul Thackara, Havre, France.)

The potato crop of France is one of the largest and most valuable crops produced in the country. According to the French official agricultural statistics, in 1900 there were 3,730,958 acres planted in potatoes, on which were raised 450,216,479 bushels, an

average of 120.6 bushels per acre. The value of the crop was \$114,887,861, or an average of 25½ cents per bushel. This crop was over twice as large as that raised in the United States during the same year, as, by the statistics of the United States Department of Agriculture, the American production was 210,926,897 bushels. The crop during 1900 was not an exceptional one, as the averages for the ten years from 1891 to 1900, inclusive, were as follows: Acreage, 3,786,928 acres; production, 451,850,204 bushels; production per acre, 119⅓ bushels; value per bushel, 26⅓ cents. In 1900 there were 7,291,534 bushels exported from France, principally to Great Britain and Belgium, and 1,992,120 bushels imported. The native consumption was 444,917,065 bushels during the same year, which is about 11½ bushels per capita.

The ground and climate of France are well adapted for raising potatoes, but the methods of cultivation differ from those in the United States from the fact that as farming on a large scale is the exception rather than the rule, but little labor-saving machinery is employed. There are many farms in France of 15 or 20 acres, the labor for which is furnished by an average family, and the means for tilling the soil and harvesting the crops are those which have been in use for generations. But owing to the excellent theoretical and practical work which is being done in the French agricultural schools, model farms, etc., the farmer is rapidly realizing that by the use of up-to-date methods he can get better results from his land for the time, labor, and money expended. As a general rule, the plow, hoe, and spade are the implements in use. The potatoes, either whole or in quarters, are planted about 12 inches apart, 8 inches deep, and in rows separated from each other from 12 to 16 inches. They are gathered either by plowing or are dug up with a spade. A man does the digging and women and children follow, picking the potatoes up and putting them in bags or baskets. After having been left to dry for about two weeks, if intended for sale, they are sorted by hand and sent to the neighboring market or are kept for the visiting buyers of the wholesale merchants. From information obtained by personal interviews with several of the local wholesale potato dealers, the only potato labor-saving machines advertised in this locality are those made by a firm in Breslau, Germany. They consist of a potato digger, a machine for preparing the ground and planting, and machines for sorting. According to the prospectus issued by one of its agents, Paul Lansiaux, 14 Place St. Géry, Valenciennes, these machines were awarded a diploma and a medal at the Chicago exposition.

In my opinion, if our American machines were properly exploited an outlet for their sale could be made in France. Catalogues or

circulars printed in English sent to the French potato growers would simply be a waste of time and money and would get no results. If one is serious in endeavoring to sell machines in this country, by creating a demand where there is but little at present, my advice would be to send over a representative—one speaking French would be preferable—with a full line of products. Let him exhibit them at the agricultural fairs which are held at stated intervals in the different Departments, or let him visit the regions where potatoes are grown so as to be present at the markets which are held weekly in every commune, town, or village in France, to which the farmers bring their produce to sell. Let him be prepared to give an ocular demonstration of the efficiency and economy of the machines. He would be able to gain a practical knowledge of the actual conditions under which the machines would have to be employed, the character of the soil, the methods of planting and tilling the ground, the kind of manure used, the merchantable sizes of the potatoes, etc. He would ascertain what changes, if any, have to be made to adapt the American machines for use by the French farmer. If the machines should prove successful the representative would have no trouble in securing agents in the different agricultural centers. The above is the method that has been employed to great advantage by American manufacturers of plows and harvesting and other agricultural machinery, and in my opinion is the only satisfactory one.

The following are the principal potato-growing Departments, in the order of their importance, according to the statistics of 1900: Finistère, Saône-et-Loire, Vosges, Ardèche, Dordogne, Côtes-du-Nord, Puy-de-Dôme, Nord, Allier, Loire, Creuse, Loire Inférieure, Sarthe, Isère, Ain, Corrèze, Lot-et-Garonne, Indre, Pas-de-Calais, Drôme, Charente, Ille-et-Vilaine, Calvados, Seine Inférieure, and Manche.

A. M. THACKARA, *Consul*.

HAVRE, FRANCE, *December 8, 1903.*

STEAMSHIP AND RAILWAY COMMUNICATION OF NANTES.

(*From United States Consul Ridgely, Nantes, France.*)

Three of the great railway systems of France enter Nantes, viz, the Paris and Orleans, the State Railway, and the Western of France. Thus in point of railway service no city in France, except Paris, is more advantageously placed. Paris is less than six hours distant by fast express and Bordeaux less than five hours. The very best railway facilities exist for transporting freight between Nantes and all interior points of France. Besides, Nantes, though not situated on

the sea, is none the less a seaport, since it is on the navigable Loire, only 30 miles from the Atlantic, and has regular lines of cargo steamers, not only to Havre, Bordeaux, Marseilles, and all ports in the west and northwest coast of France, but to London, Dublin, Glasgow, Antwerp, and various Spanish ports. St. Nazaire, the seaport of Nantes, situated on the Atlantic at the mouth of the Loire, is a port of call for the ships of the Compagnie Transatlantique, and is a very busy port. Ships from Mexico and the Antilles frequently land their passengers there, as it is the first French port touched on the home journey.

The work of widening and deepening the Loire between Nantes and St. Nazaire will be commenced early next year, and at its completion—which is fixed three years hence—the biggest ships will be able to come directly up to the fine docks at Nantes. Once this improvement is accomplished it is believed that Nantes will soon rival Havre as a seaport. It is closer to New York by 300 kilometers (186 miles) than Havre, and being much better situated for communication with the interior there is every reason why it should rank as high as, if not higher than, Havre as a seaport. There is always talk and always hope of a direct line from here to the United States, but this will probably not be realized until the improvements in the Loire have been completed, although there is no reason why such a line should not be established at once between St. Nazaire and New York or Philadelphia. A new line with weekly sailing from Nantes to London will be inaugurated on the 18th of October, 1903.

During the year 1902 1,068,263 tons of merchandise were handled in the quays of Nantes, and the indications are that these figures will be equaled this year.

BENJ. H. RIDGELY, *Consul.*

NANTES, FRANCE, *October 1, 1903.*

ANNABERG AS AN INDUSTRIAL CENTER.

(From United States Consul Winter, Annaberg, Germany.)

The industrial and commercial importance of this small city and the section of country embraced in the Annaberg consular district is certainly an interesting study.

In the first place Annaberg is an inland mountain town, separated from the outside commercial world by a wide stretch of country over which the raw materials used in its manufactories must be brought. It is in the center of what is known as the Erzgebirge, or mineral mountains, of Saxony. It is situated more than 2,000 feet above the level of the North Sea and is many miles from any navigable river.

Notwithstanding these natural disadvantages, Annaberg and the many adjacent smaller towns have built up numerous important industries that have brought wealth, employment, and commercial success to this mountain district, and made the name of Annaberg well known in the commercial cities of the world.

During the year ended December 31, 1902, dress trimmings to the amount of \$438,960 were exported to the United States from this district, but for the first six months of 1903 they amounted to only \$360,963. Great Britain, however, is the largest purchaser of dress trimmings.

This consular district being situated far in the interior of Germany, and the merchants here obtaining their foreign supplies through wholesale houses in Hamburg, Bremen, Leipzig, and Chemnitz, it is impossible to secure reliable data in regard to the amount and kinds of imports received here from the United States.

The principal exports to the United States after dress trimmings are buttons, linen goods, paper ware, toys, etc., the whole amounting to \$567,590 during the calendar year 1902 and to \$400,784 for the first six months of 1903.

The manufacturing industries of the district during the past year have had more than an average measure of prosperity.

Dress trimmings, toys, buttons, and paper goods, the leading articles of manufacture, were in good demand and manufacturers and exporters have been remuneratively employed.

The ever-changing fashions in female attire, however, render it extremely difficult for the manufacturers to keep in touch with the requirements in dress trimmings.

The toy industry of Marienberg and Obernhau (in this consular district) have had an unusually prosperous year, and the manufacturers of paper goods in Buchholz, a suburb of Annaberg, have been well supplied with orders during the same time.

JNO. F. WINTER, *Consul*.

ANNABERG, GERMANY, *October 30, 1903.*

AMERICAN PURCHASES OF GERMAN HOSIERY AND GLOVES.*

(*From United States Consul Monaghan, Chemnitz, Germany.*)

Although machine building is the leading industry of Chemnitz, its great textile industry is that which possesses most interest for American importers and consumers, for no other country exports nearly as large a quantity of gloves and hosiery to the United

* Extract from the annual report of Consul Monaghan, which will appear in full in *Commercial Relations* for 1903.

States as does this one city of Chemnitz. For this reason it will be of interest to take a closer look at the trade changes in the export from Chemnitz to the United States during the past year and compare the figures with those of the last decade, so as to obtain a larger view of the tendencies in this important branch of the American import trade.

CHEMNITZ HOSIERY EXPORT.

Most prominent of all the classes of exports from Chemnitz is that of hosiery, of which the exports to the United States during the year ended June 30, 1903, amounted to \$4,919,011. Marked changes have been taking place in this export trade during the last fourteen years, characterized mainly by a continuous decline from 1890 to 1900 and a rapid increase from then until the present year. The increase during recent years is to be explained mainly by the extremely favorable fashion which prevailed in the United States and which has taxed our own factories to their utmost.

In the cheaper classes of hosiery American manufacturers have developed sufficiently to supply not only the home demand, but also to carry on an effective competition upon the foreign markets of the world. These cheaper goods are now going to South America and to the Orient, even finding their way into the Far East by way of European foreign merchants, while during the last year American agents have even visited Berlin with cheap American hosiery. In view of the heavy export of hosiery from Germany to the United States, this new phase of the trade possesses extraordinary significance for the future.

Cotton hosiery.—In the line of the high grade and expensive fancy and embroidered hosiery, Germany, however, continues to rule supreme. Her position is due to her excellent system of technical education, the cheapness of her hand labor, her long and valuable experience running through centuries, the possession of the most complex, perfect, and most modern hosiery machinery, and the advantage of original occupation of the market, coupled with an unshaken reputation for good quality and fine taste. These are the considerations that furnish us with an explanation for the enormous export of cotton hosiery to the United States, amounting to \$4,751,661.48 during the year ended June 30, 1903, from Chemnitz alone. For the previous year the export was \$3,778,126.47, so that there was an increase of \$1,000,000—a truly remarkable figure. Large as this figure is it is but two-thirds of that for the year 1890, when the total export of cotton hosiery was \$6,103,848.58. The increase for the last year was beyond what could well have been expected, in view of the high price of cotton and the confusing and disastrous fluctuations of the market throughout the year.

Woolen hosiery.—The woolen-hosiery export to the United States for the fiscal year ended June 30, 1903, was \$72,624.50, as compared with \$66,137.58 for the preceding year. The heaviest export in woolen hosiery was recorded in 1897, when it reached the remarkable figure of \$253,144. Within two years from that date the export had fallen to \$53,036.58, and ever since had remained in more moderate bounds, due largely to the rapid development of the woolen-manufacturing industry of the United States. The increase in this line during the past year must be attributed largely to the fact that the local market offers beautiful qualities of fancy and embroidered hose, such as seem beyond the power of American manufacturers to turn out at a sufficiently low price to enable the home product to compete with the German make, even with the high protection offered by our tariff.

Silk hosiery.—The export of silk hosiery to the United States for the fiscal year ended June 30, 1903, was \$94,725.44, as compared with \$61,729.36 for the preceding year. The export of silk hosiery from Chemnitz to the United States has fallen off considerably during the last fourteen years, that for 1903 having been but about one-third of the amount for the year 1890. Were it not for the almost inexhaustible demand for silk hosiery in the United States there is every reason to believe that the American industry would be able to supply the entire market, so extraordinary has been its development. As statistics show, the United States can now produce 70 per cent of the entire amount of silk goods consumed in the country.

GENERAL VIEW OF HOSIERY EXPORT.

The export trade in cotton, wool, and silk hosiery from Chemnitz to the United States during the fourteen years show the following facts: An unusually heavy export during the years clustering around the banner year 1890; then a rapid decline, followed by a recovery in 1894 and 1895; another continued decline up to the last year; and now an extraordinary increase, which it seems attained its climax about the close of the year ended June 30, 1903. During the months of July and August of 1903 the export has not held its own with the preceding months. The following figures show the value of the exports of hosiery to the United States during the fourteen fiscal years ended June 30, 1903:

Year.	Cotton hosiery.	Woolen hosiery.	Silk hosiery.	Total.
1890.....	\$6,103,348.58	\$225,374.63	\$275,611.84	\$6,602,335.05
1891.....	5,118,409.73	116,045.12	185,007.75	5,419,462.60
1892.....	4,494,150.26	141,179.21	158,672.46	4,794,001.93
1893.....	4,865,061.48	118,414.45	176,754.09	5,160,230.03
1894.....	4,108,368.20	56,136.34	60,438.19	4,224,942.73

Year.	Cotton hosiery.	Woolen hosiery.	Silk hosiery.	Total.
1895.....	\$5,366,991.75	\$143,704.67	\$149,537.83	\$5,660,234.25
1896.....	4,302,430.00	253,144.00	63,189.00	4,618,763.00
1897.....	4,324,159.47	221,634.28	40,258.73	4,586,052.48
1898.....	3,223,864.84	53,036.58	52,530.90	3,329,432.32
1899.....	3,177,825.00	90,206.00	37,443.00	3,305,474.00
1900.....	3,515,001.29	66,418.42	41,735.20	3,623,154.91
1901.....	3,917,213.20	56,499.30	42,723.86	4,016,436.36
1902.....	3,778,126.47	66,137.58	61,729.36	3,905,993.41
1903.....	4,751,661.48	72,624.50	94,725.44	4,919,011.42

From the above it appears that the export in cotton hosiery increased to the amount of nearly \$1,000,000 during the last year, but indications at present do not speak for any such heavy export for the year to come.

CHEMNITZ GLOVE EXPORT TO THE UNITED STATES.

The total export of cotton, woolen, and silk gloves from Chemnitz to the United States for the fiscal year ended June 30, 1903, was over \$2,330,000. This is an enormous increase over the export for the preceding years and exceeds the largest export of gloves from this consulate of any previous year to the amount of \$500,000, and is twice the total amount of gloves of all kinds which were sent to the United States during the preceding year. In general, there was a continued decline in the export of gloves since the heavy year 1890 until within the last two years, when the trade again picked up as a result of a highly favorable fashion and capped the climax during the phenomenal year just completed.

Cotton gloves.—The heaviest increase is recorded in the cotton-glove trade, in which the export rose from \$764,812.28 in the fiscal year ended June 30, 1902, to \$1,124,754.20 for the year just ended, an increase of \$359,941.92. In the year 1901 the figures stood \$622,633.66, so that the last year's export was almost double the export for that year. The markets in the United States were extremely favorable and the demand far beyond that which our home manufacturers could meet. At present, with the new fiscal year well begun, indications point to a decrease in the export, not only in cotton gloves, but in all other departments as well. More cotton gloves were sent to the United States during the last year than were shipped during the four years from 1894 to 1898.

Woolen gloves.—The export of woolen gloves during the year ended June 30, 1903, amounted to \$785,914.32, which is the heaviest export recorded at this office in the history of the consulate by more than \$100,000. The next best year was that of 1890, when the export reached \$686,171.22. During the year 1902 the export was \$419,528.08 and was a large increase over the year 1901, when the

export amounted to only \$118,212.22. During the first quarter of the present fiscal year—July, August, and September, 1902—the woolen-glove export steadily increased, and in the months of September, October, and November amounted to the enormous figure of over \$440,000. As in case of cotton gloves, present indications point to a decrease for the present year.

Silk gloves.—The export of silk gloves from Chemnitz to the United States during the fiscal year just completed was \$435,906.28. While this is not the heaviest export recorded here, it is almost five times the total export for the fiscal year ended June 30, 1902, when the figure was \$91,647.13. The year 1890 was unusually heavy and shows an export of silk gloves amounting to \$681,652.35. The heavy export during the year ended June 30, 1903, is due to the extremely favorable fashion existing in the United States.

Although our own manufacturers have made fine advances in the silk industry, and particularly in the silk-glove branch, the home demand was apparently more than they could supply. An unusually heavy business was done in long silk gloves, with hand embroidery, and fine machine lace. The figures at which these gloves are put upon the local market for American purchasers would astonish the fashionable buyers in the United States. Certain manufacturers who manufactured their own lace had a tremendous advantage in competition and offered gloves to the foreign buyer which were almost perfect in workmanship and design and marvelously cheap in price.

The following table shows the trade changes in the export of all kinds of gloves from Chemnitz to the United States during the fourteen years ended June 30, 1903:

Total exports of gloves.

Year.	Cotton gloves.	Woolen gloves.	Silk gloves.	Total.
1890.....	\$465,690.69	\$686,171.22	\$681,652.35	\$1,833,514.26
1891.....	359,806.34	263,590.25	501,820.64	1,125,217.23
1892.....	319,639.98	344,081.10	472,213.93	1,135,935.01
1893.....	470,823.38	461,642.04	530,913.55	1,463,378.97
1894.....	223,491.28	200,807.21	145,300.58	569,599.07
1895.....	246,800.08	164,274.49	374,358.07	785,432.64
1896.....	256,637.00	381,456.00	271,498.00	909,591.00
1897.....	233,107.95	293,881.58	115,450.53	642,440.06
1898.....	244,887.81	36,161.63	142,390.28	423,439.72
1899.....	320,701.00	134,285.00	147,775.00	602,761.00
1900.....	420,522.43	108,875.72	111,568.21	640,966.36
1901.....	622,663.66	118,212.22	96,621.11	837,496.99
1902.....	764,812.28	419,528.08	91,647.13	1,275,987.49
1903.....	1,124,754.20	785,914.32	435,906.28	2,346,574.80

J. F. MONAGHAN, *Consul.*

CHEMNITZ, GERMANY, *October 1, 1903.*

GERMAN BEET-SUGAR INDUSTRY.

(From United States Consul Warner, Leipzig, Germany.)

INTRODUCTION.

At the time it was decided to make a report upon the German beet-sugar industry the writer was ignorant of the fact that it had been so ably handled by many, either in an official or a private capacity, both in this country and in the United States. Especial attention is called to the exhaustive way in which the German sugar industry has been treated by the United States Bureau of Statistics, beginning on page 2587 of the Monthly Summary of Commerce and Finance of the United States, January, 1902, and the reprint extracts thereof which appeared in the same publication for November, 1902. It is hoped that by bringing some of the figures appearing therein down a year later and handling the subject in a somewhat different way—*i. e.*, by dealing more with the agricultural and economical features thereof—it will have accomplished what was intended, namely, to furnish information that will be of interest to the American beet-sugar industry, which, although yet in its infancy, is destined to become a great commercial factor.

HISTORICAL.

It was in 1747 that the German chemist Marggraf (1709–1782) discovered the existence of sugar in beets and recommended that they be cultivated in order to produce sugar; but almost fifty years elapsed before practical results were obtained therefrom.

In 1796 Dr. Franz Karl Achard, a pupil of Marggraf, having succeeded in extracting sugar from beets in commercial quantities at a cost so as to enable it to compete with cane sugar, the then ruler of the world's markets erected the first beet-sugar factory at his farm, Kunern, near Steinau, Lower Silesia. The political events of the succeeding years tended to further the production of sugar beets, as did the improved technical methods. The continental blockade (November 21, 1806) prohibiting the importation of English goods into European countries caused the cane-sugar imports to decrease and at the same time gave an impetus to the beet-sugar industry. After the downfall of the Napoleonic régime (1815) it was not for the mother country of sugar beets to continue in the lead; indeed, the devastation and depression of the country and the resumption of the cane-sugar imports retarded the growth thereof in Germany. Instead, this new industry began to flourish in France, owing to public subventions and the great wealth of the country. As early as 1828 there were already 108 beet-sugar factories established there.

In Germany, on the other hand, the production of sugar beets did not begin to increase until the 1830's, from which date to the present time it has steadily grown, until now Germany's beet-sugar industry is the largest in the world. A clear conception of this growth may perhaps best be obtained from an examination of the following figures:

TABLE I.—*Growth of the beet-sugar industry in Germany.**

Year.	Factories in opera- tion.	Beets worked up.	Raw sugar produced.	Average quantity of beets worked up per factory.	Beets re- quired to produce a ton of raw sugar.	Sugar in beets.
	<i>Number.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Per cent.</i>
1836-37.....	122	25,346	1,408	207.7	172.9	5.55
1840-41.....	145	241,486	14,205	1,665.4	170	5.88
1850-51.....	184	736,215	53,349	4,001.1	138	7.25
1860-61.....	247	1,467,702	126,526	5,942.1	116	8.62
1870-71.....	304	3,050,745	186,418	10,068.1	116	8.62
1880-81.....	333	6,322,203	573,030	18,690.3	110.6	9.04
1890-91.....	406	10,623,319	1,284,485	26,195.8	79.5	12.54
1900-1901.....	395	13,253,909	1,874,715	33,552	67.2	14.86
1901-2.....	395	16,012,867	2,182,361	† 40,538.9	73.4	13.63
1902-3 (13 months)†.....	393	11,270,978	1,645,444	28,679.3	685	14.6

* Compiled from Handwörterbuch der Staatswissenschaften, Vol. VII, p. 999, and other authorities.

† Estimated.

‡ This year is made to end with August (the years previous hereto ending on July 31), to conform to a provision of the Brussels convention; hence the thirteen months.

The causes of the increase in the beet-sugar industry of Germany, as well as of the other European countries, may be attributed to three things, namely:

1. Beets thrive in different kinds of soils, in diverse climates, and over a large area (of course, some varieties of beets being better suited to certain climates and soils than others).

2. The assistance rendered by agricultural chemistry undertaken by public experiment stations, societies, and private individuals.

3. The liberal subventions given the industry by some governments.

With these things to foster the beet-sugar industry of this country, its increase has been very marked, though somewhat irregular. The extraordinary encouragements offered beet growers led in 1884 and 1885 to an overproduction, which brought with it all the usual evils, viz, a reduction of prices, a stagnation of business, and a decreased production, which lasted several years. During this period of depression, however, other countries were continuing to increase their respective productions, and it was not until 1892-93 that the German industry began to show new signs of growth, though by no means in the same proportion as formerly. For the purpose of comparison the figures given below show the production of beet sugar in

Germany, France, Russia, and Austria, the four most important beet-sugar countries:

TABLE II.—*Production of raw beet sugar.**

Year.	Germany.	France.	Russia.	Austria.
	<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>
1852-53.....	84,000	50,000	25,000	30,000
1859-60.....	145,000	111,000	30,000	84,000
1869-70.....	217,000	289,000	132,000	151,000
1880-81.....	573,000	317,000	276,000	533,000
1890-91.....	1,331,000	694,000	544,000	778,000
1900-1901.....	1,979,000	1,155,000	893,500	1,080,675
1901-2.....	2,302,000	1,170,000	1,104,700	1,288,055
1902-3.....	1,748,556	837,178	1,215,000	1,057,202

* Compiled from *Le sucre de betterave en France* (Paris, 1900) and other authorities.

There are other countries that are rapidly becoming large beet-sugar producers, some of which are Italy, Sweden, Japan, Spain, and the United States. Belgium and the Netherlands, while they produce more than enough for the home markets, can not materially increase their productions, owing to the small available area they possess. Spain, with her cane sugar, already possesses more than enough to supply the local demand, and Italy is already almost independent of foreign markets.

Before concluding the historical summary, a word further should be said about the cane-sugar industry. The table immediately following shows a comparison between the production of the world's beet and cane sugar. The same, however, is not correct, because the statistics regarding India, China, and Japan are not available. However, it indicates that the beet-sugar industry is to-day far ahead of the cane. Perhaps now that the political, economical, and social conditions of the tropical countries are being so much bettered, there will develop a new era in the life of sugar cane.

TABLE III.—*World's sugar production.**

Year.	Production of—		Total production.
	Beet sugar.	Cane sugar.	
	<i>Metric tons.</i>	<i>Metric tons.</i>	<i>Metric tons.</i>
1852-53.....	202,000	1,260,000	1,462,000
1859-60.....	451,000	1,540,000	1,991,000
1869-70.....	846,000	1,740,000	2,586,000
1880-81.....	1,820,000	2,027,000	3,847,000
1890-91.....	3,666,000	2,860,000	6,526,000
1900-1901.....	6,040,000	3,435,000	9,475,000
1901-2.....	6,905,000	3,796,000	10,701,000
1902-3.....	5,613,000	4,118,000	9,731,000

* Compiled from *Handwörterbuch der Staatswissenschaften*, 2d ed., Vol. VII, and other authorities.

PRODUCTION OF SUGAR BEETS.

It is true that German agriculture has experienced many changes since the formation of the Empire in 1871, not only in the kinds of crops, but in the quantities thereof as well. The system of intensive farming has been so developed that to-day there is hardly an acre of land, however poor, that is not used for some purpose or other. In the year 1878 the area devoted to the cultivation of cereals was about 32,927,471 acres, and in 1900—the year the last statistics were compiled—35,930,680 acres, showing an increase in area of 3,003,209 acres. In 1878, 8,779,463 acres were planted with vegetables, of which 6,715,168 acres were potatoes and 434,401 acres were devoted to the cultivation of sugar beets and sugar-beet seeds. In 1900, 11,349,874 acres were planted with vegetables, of which 8,010,606 acres were potatoes and 1,138,971 acres sugar beets. The increase in the total vegetable area and in that of potatoes and sugar beets has been 29.3 per cent, 17.5 per cent, and 162.2 per cent, respectively. In a word, it may be said that the enormous increase in the production of potatoes and sugar beets is to be accounted for by recalling that such articles, because of their auxiliary industries, are especially adapted to the most intensive form of farming.

From the last two official crop statistics, for the years 1893 and 1900, we are able to note the exact changes that have taken place in the way the land has been cultivated, as is to be seen from the following table:

TABLE IV.—*Division of area.**

Tillable land.	Area cultivated.		Total area.	
	1893.	1900.	1893.	1900.
	<i>Acres.</i>	<i>Acres.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Agriculture.....	86,891,715	86,621,926	60.1	64.8
Arable and garden products.....	64,846,979	64,881,820	48.55	48.56
Cereals	35,357,620	35,869,097	26.4	26.85
Vegetables.....	10,471,257	11,349,874	7.84	8.5

* Compiled from Vierteljahreshefte zur Statistik des Deutschen Reichs and other authorities.

The cultivation of beets is, of course, included under vegetables in the above.

The following table shows the total area in vegetables, in sugar beets, and beets of all kinds for the years 1903 and 1900, respectively:

TABLE V.—*Area in vegetables and sugar beets.**

Year.	Vegeta- bles.	Sugar beets.	Total beets.
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
1903.....	10,471,257	976,823	2,097,106
1900.....	11,349,874	1,138,942	2,420,910

* Compiled from Vierteljahreshefte zur Statistik des Deutschen Reichs and other authorities.

In the year 1893, 1.56 per cent of the arable and garden land under cultivation in Germany was devoted to the raising of sugar beets and sugar-beet seeds. In 1900, it had increased to 1.81 per cent.

The efforts which the farmers have made to cultivate sugar beets have not remained unrewarded. Their profits have been increased, not only because of the beet production and its by-products, which are so valuable for cattle raising, but by reason of the greater fertility and productivity of the soil consequent on beet growing.

The process of extracting sugar from beets would seem to be an industry which may be most profitably operated on a large scale, as regards the number of persons employed. This may perhaps be seen from the following table:

TABLE VI.—*Number of employees and factories in 1895.**

Factory employing—	Number of factories.	Number of employees.
1 to 20 persons.....	10	78
21 to 100 persons.....	43	2,913
101 to 500 persons.....	384	78,983
501 to 1,000 persons.....	18	11,843
More than 1,000 persons.....	1	1,345
Total.....	456	95,162

* Compiled from Statistik des Deutschen Reichs, 1895, vol. 113, and other authorities.

Now, before taking up the practical part of this subject, a few more statistics must be inserted. This is done without comment, it being hoped that the next two tables have been compiled so as to show, at a glance, important features connected with the manufacture of beet sugar.

TABLE VII.—*Regarding raw-sugar factories.**

Description.	1896-97.	1901-2.	1902-3.
Number of factories.....	399	395	393
Steam engines:			
Number.....	5,446	5,789	5,811
Horsepower.....	105,788	134,567	138,020
Number of periods of labor of twelve hours.....	68,757	65,342	4,859.1
Beets worked up.....metric tons...	13,721,601	16,012,867	11,270,978
Area of beets.....acres...	1,089,881	1,182,970	1,056,727
Average of beets per hectare (2.471 acres).....metric tons...	32.3	33.4	26.4
Production of raw sugar.....do.....	1,738,885	2,182,361	1,645,444
Average production of raw sugar per 1 double centner (220 pounds) of beets.....kilograms...	12.66	13.63	14.6
Quantity of beets necessary for the production of 1 kilo- gram (2.2046 pounds) of raw sugar.....kilograms...	7.9	7.34	6.85

*Compiled from Vierteljahreshefte zur Statistik des Deutschen Reichs, 1902, Part IV, and 1897, Part IV, and other authorities.

TABLE VIII.—*Production and consumption of beet sugar.**

District.	Number of factories.	Consumption of—			
		Beets.	Raw sugar.	Refined sugar.	Sirup.
1896-97.					
<i>Sugar factories.</i>					
		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Province of Silesia	57	1,622,101.3	54,730.6	432.8	15,456.7
Province of Saxony.....	115	3,981,521.5	19,129.1	1.9	10,954.3
Province of Hanover	44	1,186,355.5	.....	1.1	2,403.8
Prussia.....	308	10,738,018.8	90,083.5	821.4	55,153.9
Brunswick	32	860,473.4	1,637.1	26.2	4,159.3
Anhalt	26	755,390.4	850	.....	.....
Germany	399	13,721,601.4	116,435.3	4,061.2	70,716.2
<i>Sugar refineries.</i>					
Germany.....	51	.....	796,059.8	21,827.1	11,616.3
<i>Molasses refineries.</i>					
Germany.....	6	.....	2,000.1	10,068.6	210,737.1
Total for Germany.....	456	13,721,601.4	914,495.2	35,956.9	293,069.6
1901-2.					
<i>Sugar factories.</i>					
Province of Silesia.....	56	1,784,201	57,684.4	154.9	2,299.7
Province of Saxony.....	112	4,177,929.5	19,486.9	325.9	.....
Province of Hanover	43	1,583,443.6	2,270.1	.....	.....
Prussia.....	302	12,534,971.2	100,620.6	513	18,914.2
Brunswick	32	1,051,758	1,504.9	15	2,244.6
Anhalt	24	680,589.9	1,655.3	.....	.....
Germany.....	395	16,012,868.8	141,984.1	7,779.7	21,158.8
<i>Sugar refineries.</i>					
Germany.....	46	.....	1,053,698.2	5,697.1	.....
<i>Molasses refineries.</i>					
Germany.....	6	.....	7,215	7,710.9	254,918.5
Total for Germany	447	16,012,868.8	1,202,897.3	21,187.7	276,077.3
1902-3.					
<i>Sugar factories.</i>					
Province of Silesia.....	56	1,468,706	72,514	167	2,218
Province of Saxony.....	112	3,061,240	21,175	28.7	.....
Province of Hanover	43	959,997	1,479.6	1	.....
Prussia.....	300	9,006,621	123,666.7	823.1	7,457.4
Brunswick	32	626,691	1,636.9	.....	1,118.8
Anhalt	24	571,860	1,360.4	.....	.....
Germany.....	393	11,270,978	157,919	7,630.3	8,576.2
<i>Sugar refineries.</i>					
Germany.....	45	.....	1,156,239	6,389.3	.....
<i>Molasses refineries.</i>					
Germany.....	6	.....	9,067.8	8,724.9	285,624
Total for Germany.....	444	11,270,978	1,323,226	227,445	294,900.2

* Compiled from Vierteljahreshefte zur Statistik des Deutschen Reichs, 1902, Part IV, and 1817, Part IV, and other authorities.

TABLE VIII.—*Production and consumption of beet sugar*—Continued.

District.	Production of—		
	Raw sugar.	Refined sugar.	Sirup.
<i>1896-97.</i>			
<i>Sugar factories.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Province of Silesia	183,413.3	67,422.7	44,277.5
Province of Saxony	492,739.6	25,581	92,070.4
Province of Hanover.....	143,988.2	4,703.5	30,933.8
Prussia	1,297,097.2	134,695.4	264,157
Brunswick.....	102,759.1	5,725.6	26,644.2
Anhalt.....	85,190.2	12,971.3	16,715.7
Germany.....	1,647,818.9	190,812.1	342,321.6
<i>Sugar refineries.</i>			
Germany.....	6,942.2	724,438.8	72,060
<i>Molasses refineries.</i>			
Germany.....	4,293.5	89,703.4	20,316.3
Total for Germany.....	1,659,054.6	1,004,954.3	434,698.9
<i>1901-2.</i>			
<i>Sugar factories.</i>			
Province of Silesia	224,377.9	89,127.2	44,279.7
Province of Saxony	531,308	48,331.5	95,769
Province of Hanover.....	200,125.3	11,752	33,096.9
Prussia.....	1,597,662.1	201,612	284,080.6
Brunswick.....	133,056.9	7,787.6	27,742.8
Anhalt.....	75,137.3	12,815.7	17,846.2
Germany.....	2,017,673.8	283,783.4	370,552.8
<i>Sugar refineries.</i>			
Germany.....	6,409	954,527.7	97,416.6
<i>Molasses refineries.</i>			
Germany.....	9,600.7	107,136.8	21,711.9
Total for Germany.....	2,033,743.5	1,345,447.9	489,681.3
<i>1902-3.</i>			
<i>Sugar factories.</i>			
Province of Silesia.....	185,190.1	91,774.5	43,164.6
Province of Saxony.....	407,971.3	52,260.3	1,812.4
Province of Hanover.....	130,482.2	209,242.7	26,705.3
Prussia	1,209,730.8	209,242	238,933.3
Brunswick	85,105	58,070.8	17,234.8
Anhalt	68,439	13,108.4	16,243.3
Germany	1,499,038.8	281,522	306,392.4
<i>Sugar refineries.</i>			
Germany	6,350.1	1,053,725.7	108,789.2
<i>Molasses refineries.</i>			
Germany	10,656	124,123	26,117.2
Total for Germany.....	1,516,044.9	1,459,370.7	441,298.8

CULTIVATION OF SUGAR BEETS.*

The agrarian crisis, which occurred in Germany as well as in other European countries, in the year 1879 was caused by the importation of large quantities of American cereals to these markets.† This resulted in many of the larger farmers limiting the area devoted to the production of grain and enlarging that of vegetables, especially sugar beets and potatoes.

Farming in Germany is very different from anything known in the United States. There are many causes therefor, the most important of which are the sound educational and financial features. However, these will not be taken up in this paper, but will be held for a more appropriate occasion.

CLIMATE.

Sugar beets are successfully planted in all parts of Germany. Of course in some sections better results are achieved than in others. The Province of Saxony, which formerly belonged to the Kingdom of Saxony, is where perhaps the largest and best crops are grown.

Sugar beets need a certain amount of water, as well as plenty of sunshine and light. Experience has demonstrated that the temperature of the growing season is an important factor in the percentage of sugar contained in beets. All things being equal, the longer the days the greater will be the sugar percentage and the purity coefficient, due to the action of the sun's rays.

SOIL.

It is believed by some experts that a maximum beet yield produces a smaller percentage of sugar than a normal one. Beets are known to thrive in many kinds of soils; perhaps the best of them is a mild, loamy, sandy one, with plenty of depth and humus. The beet is a deep-rooting plant, which takes a large part of the moisture it requires at a depth of from 20 to 30 centimeters (8 to 11.8 inches). Beet fields must be well drained, not only on the surface but to a depth of 50 centimeters (19.68 inches). While the plants require a certain amount of moisture, if they have too much the crop of leaves

* Works which have been used in connection with this paper are: W. Katzenstein's *Die Deutsche Zuckerindustrie und Zuckerbesteuerung*; Von Lippmann's *Die Entwicklung der Deutschen Zuckerindustrie von 1850 bis 1900*; Stutzer's *Zucker und Alkohol*; Knauer's *Rübenbau*; Kiehl's *Ertragreicher Zuckerrübenbau*; Von Schönberg's *Handbuch der Politischen Oekonomie*; *Handwörterbuch der Staatswissenschaften*, 2d ed. In addition thereto the writer, by visiting large farms in the Province of Saxony, where beets and beet seeds are cultivated, was able to learn from the farmers themselves how sugar beets are grown. For the kind assistance rendered by Oekonomierat Hörning the writer is deeply grateful.

† In the *North American Review*, August, 1903, p. 247, Signor Luzzatti speaks, perhaps in ill-chosen words, of "an absolute agrarian revolution" having been produced.

will be increased at the expense of the roots and the sugar percentage. One might almost say that plateau lands, as well as the slightly sloping "limestone farm lands," are best adapted for sugar-beet raising.

MANURING.

Of all root vegetable plants the sugar beet is one of the most susceptible to the nourishment which it receives from the soil. Farmers, therefore, in order to obtain the best results, manure their lands very thoroughly.

Manuring should be done in the autumn, shortly after the harvesting is over. The manure should be spread over the land and then plowed under, in which condition the fields should remain until the following spring. It has been found that good, average land will be best kept up to the standard by spreading thereon 250 cwts. of manure to the morgen.* Cattle and sheep manure may both be used. Some kinds of manure are of course better for certain kinds of soil than others.

PLOWING.

New land, or such as has been cultivated but one or two years at the most, is not the best for raising sugar beets. If only such land, however, is available, the soil will be greatly benefited and the power of producing considerably augmented by planting alfalfa, field pease, or something of the kind, and when the plants are in bloom plowing under. Intensive farming requires that soil be plowed deeper than under the old system, it having been demonstrated that better results are obtained thereby. Where formerly soil was turned to a depth of 6 to 8 inches with a two-horse plow, it is now being turned 14 to 16 inches by means of steam, electric, or six-horse plows. Oxen are also used. It is the opinion of an expert, who is one of the largest sugar-beet-seed growers in the world, that the additional power required to plow 16 inches deep instead of 12 inches in good, healthy soil does not make enough difference in the beet yield to warrant its being done; that for all practical purposes no soil except that of new, slack, or stale land need be turned more than 12 inches deep. Slack soil is plowed from 14 to 16 inches deep; new or stale soil should perhaps be plowed even deeper.† A field should be plowed as soon as possible after the crops thereon have been harvested. A good, open soil plowed 12 inches deep would appear to give the best results. The plowed fields should not be harrowed until spring. Soils need plenty of air, which the coarse furrows enable them to obtain.

* The morgen used by the consul is doubtless the German morgen, or land measure, of 0.63 acre.

† Oekonomierat Hürning, owner of the Volkstedt beet-seed farm, is my authority.

FERTILIZING.

It is not enough simply to manure the land. Good results are obtained by applying a mixture consisting of the following:

	Per cent.
Dissolved phosphates.....	36
Ammonia	20
Saltpeter, Chilean.....	16
Other mineral substances.....	28

This mixture is spread upon the fields 2 centners (220 pounds) to the morgen either by hand or machinery.

PLANTING.

Most of the planting is done in the months of April and May. The time for planting is, perhaps, when the temperature of the soil averages about 54° F., when the soil is warm enough to insure the seeds germinating within six or eight days. The seeds are drilled in rows about 16 inches apart. Care has to be taken to see that seeds are not covered up too deep. From one-half to three-fourths of an inch is about right. It is much better to have seeds covered too thinly than that they be buried too deep.

LABOR.

In Germany machinery as well as hand workers are employed in raising sugar beets. As can well be imagined, a very large number of laborers is required. In addition to the reasons already given why this country has attained such prominence in the beet-sugar industry another reason is that such cheap farm labor is to be obtained. For the most part the people who till the soil of the German beet fields are two-thirds females and one-third males. They are brought from Posen, Germany, Russian Poland, and from the Province of Galicia, Austria, usually by employment agents. Their railway fares going and coming, amounting to about 8 marks (\$1.90) each way, are paid by their employers, by whom they are fed and lodged.

By working twelve to sixteen hours a day they are perhaps able to earn 50 cents—usually less, however. The mental and moral condition of these people has often been the subject of official reports, investigations, etc., and, while all admit that their lot is a sorry one, nothing has been done to improve it.

CULTIVATION.

As soon as the seeds are in the ground, the fields are usually gone over with a roller. By this means the moisture, so essential to germination, is preserved, thus keeping the surface soil from drying for a longer period of time. Shortly after the plants become

visible, the work of hoeing and thinning out is begun. The former loosens the earth about the plants, covers up the roots thereof, and works out the weeds, thus enabling the plants to have more air; the latter, by leaving a distance of about 7 inches between the plants, gives each one more soil from which to obtain nourishment. The better weeded the rows are kept and the more frequently they are worked, including hilling—perhaps it should be called rowing—the better will be the yield as regards both quality and quantity.

HARVESTING.

About the 1st of October the beet leaves begin to turn yellow and droop, which is a sign that they are ready for gathering. At the very first indication that the beets are ripe the harvesting is not commenced, but a week or two later. By making too early a start with the harvesting, there is danger that the beets will not have attained their maximum percentage of sugar.

Now, before continuing with the harvesting of sugar beets, that point in the production thereof has been reached where a word should be said in explanation of the way that beets are grown.

For seed purposes.—The raising of sugar beets and sugar-beet seeds are two very distinct and separate occupations. Germany has taken the lead even more as regards the latter than the former. Indeed, three-fourths of the world's annual production of sugar-beet seeds (1,200,000 sacks) are grown in Germany, the Province of Saxony alone contributing 800,000 sacks. In this country the two occupations are practically separated. The professional seed growers produce a smaller quantity of sugar beets, and the professional sugar-beet growers often make no effort to raise beet seeds. Generally speaking, it may be said that the two best species of sugar-beet seeds are the Vilmorin, or French, and the Kleinwanzlebener, or German, both of which are very extensively grown. Both species are divided into any number of varieties. Indeed, every professional seed grower has his own particular brand of seeds, some of which have more or less distinctive features. There is perhaps really very little difference between the first-class seeds of these two species. As said before, the plants are allowed to ripen, which takes from one hundred and fifty to one hundred and sixty days; then the harvest begins. Each plant is pulled up one by one and placed in silos, which are usually on a side of the field—at any rate invariably in the immediate vicinity thereof. The beets remain packed in the silos until the following spring, when the time for planting comes round; then they are taken out, and each one is subjected to a chemical analysis and only those which show a high

percentage of sugar and purity are set out in rows 24 to 30 inches apart. The beets that are rejected are fed to cattle.

The plants go to seed the second year. They are harvested about the 1st of October, after the stalks have become thoroughly dry and before the rainy season sets in. The stalks are afterwards thrashed by machines in the same manner as are cereals, care being taken to keep the seeds as dry as possible. Afterwards the seeds are subjected to a screening process, which consists in passing them over a number of sieves, the chaff, stalk splints, etc., being thus separated, and afterwards the large, healthy seeds from the smaller ones, which are fed to cattle. The stalks are either used as straw bedding or else are consigned immediately to the manure pit. At the end of two years, however, the seeds are not used by first-class sugar-beet growers. The same process of two years' duration must be thrice repeated before the seeds reach the high standard required. Indeed it is said that the first quality of seeds is only obtained after five campaigns, which means only at the expiration of nine and a half years from the time the experimental seeds were first drilled.*

For factory use.—To return now to the harvesting time. The beets are here also pulled up, one by one, by hand. The machine pullers, although known, are little used. A number of laborers, who work together, are assigned a section of a field. After pulling up and laying in piles about as many beets as they can top in a day, the topping begins.

Topping.—This is done with one stroke of a sharp knife, which has perhaps an 8-inch blade and is a cross between a corncutter and a butcher's knife. The leaves, as well as about one-fourth to three-eighths of an inch of the top of the beet, are cut off. As soon as possible after beets have been topped they are loaded into wagons and started on the way to a factory. Where it is not convenient to deliver beets at once to a factory they should be placed in silos, so that there will be little possibility of their suffering from frost.

Hauling.—The hauling is done in large two-horse wagons, holding perhaps from 1 to 2½ metric tons each, the wheels of which are 3 to 4 inches broad. The advantage of having such broad-wheeled wagons, which are very plainly though substantially built, is that they are easier to draw, especially where the ground is soft, as over plowed fields, soggy roads, etc. Beets must be raised as near to the factory to which they are to be delivered as possible. The longer the haul the smaller the profits for the grower.

* Seeds may not be kept for a number of years before planting. To obtain the best results from their use they should be put in the ground the spring following the time they were harvested.

RAISERS.

The most successful sugar-beet as well as sugar-beet-seed raisers are the plantation owners. This is doubtless because this class of farmers is the only one able to get the full benefit of the by-products of the beets. The intensive system of farming requires that large quantities of manure as well as fertilizers be spread over the soil. The farmers are not able to buy sufficient quantities; therefore they must have a large supply of live stock constantly on hand to make such. The stock are not only fed with the beet leaves and tops, but with the small seed, beet pulp, and molasses as well. The factories give the farmers the pulp obtained from the beets which each one delivered, and the molasses they buy at a small price. Again, as sugar beets are worked almost entirely by hand, the big farmers are usually the ones who are in the best circumstances to pay for such labor. Another point: The three-crop system is the most common form of intensive farming. By this is meant planting different kinds of crops in rotation. For instance, on good healthy ground a crop of potatoes will be sown the first year; this will be followed the next year by sugar beets; and the third year some kind of cereal will be grown thereon. Only those who have large tracts of farm land are able to plant their fields in the rotating order here mentioned.

The most successful of the large farm owners in this country usually take charge of the entire farming themselves. The occupation is considered a highly respectable one; perhaps it is regarded more highly in Germany than in any country in the Western Hemisphere. This class of farmers is especially well qualified for the work. They are theoretically, as well as practically, educated in all branches of agriculture.

BANKING FACILITIES.

Although the farmers of this country are complaining about the little financial assistance accorded them they have certainly been provided for, not only by the State but by private individuals as well, far better than those of all other countries. Further, their educational qualifications make them competent to use to advantage the, in some respects, none too modern though liberal banking facilities offered them.

LOCATION OF FACTORIES.

Sugar-beet factories are located as near to where beets are grown as possible. Certainly an additional reason for the growth of the German beet-sugar industry to those previously given is to be found

in the cooperative factories. In the campaign of 1901-2 40.8 per cent of the beets consumed were grown by factories themselves or by shareholders in cooperative factories. In Germany sugar factories are not the direct results of the money of capitalists seeking investment. They have sprung up because of the necessity which the farmers of a certain community may have manifested for them.

TAXES.

Before concluding, a few words should be said about the taxation to which the beet-sugar industry has been subjected. The history thereof shows that it has been of the greatest benefit to the industry, enabling it to build up an enormous export trade. There have been, as a matter of fact, three forms in which these taxes have been levied. The first, and that which continued for the longest period (1841 to 1884), was the taxation of sugar beets. While this tax was at first but 10 pfennigs (2.38 cents) per double centner (220 pounds) before the law under which it was levied was finally repealed, it had increased to 1.80 marks (43 cents) per double centner, it having been increased whenever it was found that a larger quantity of sugar could be obtained from a double centner of beets. When sugar was exported the taxes were refunded, the Government assuming a certain number of pounds of sugar to have been produced per double centner of beets consumed. This assumed quantity was necessarily a general average for all establishments.

The larger factories, owing to the higher percentage of sugar contained in the beets and to improved machinery, had a decided advantage over the smaller ones, as regards the export trade. The former, by exporting, received bounties larger than the actual taxes paid by them. Such trade was, therefore, more profitable for them than selling in the home markets. The financial success of this system was not that which was expected of it, as will be seen from the figures of the last year the same was in force, namely, 1887-88: * Total taxes collected, 118,388,000 marks (\$28,196,344); total export rebates, 105,568,000 marks (\$25,125,184); net proceeds, 12,920,000 marks (\$2,951,160).

The result of Germany's increased export of beet sugar caused the sugar prices in foreign countries to fall. It caused France, Austria, and other beet-sugar countries to guard their beet-sugar industries by means of similar bounties, direct or indirect, in order to hold their respective export trades. In 1888 the constant falling of prices occasioned by overproduction caused the governments of the countries exporting beet sugar to make an effort to abolish all

* Von Schönberg's Handbuch der Politischen Oekonomie, 4th ed., Vol. III, Part I, p. 689.

bounties, drawbacks, premiums, etc. A conference was held at London in 1888 for this purpose, the results of which were fruitless, however.

The second system of taxation, or that introduced in 1888, was of short duration, lasting but four years. This provided for a tax of 80 pfennigs (19 cents) per double centner (220 pounds) of beets and, in addition thereto, one of 12 marks (\$2.85) per double centner upon manufactured sugar. Further, the drawbacks were correspondingly reduced. The results of this system, during the last year (1891-92) it was in force, may be seen from the following figures: Total taxes collected, 143,515,000 marks (\$34,156,570); total export rebates and bounties, 74,611,000 marks (\$17,757,180); net proceeds, 68,904,000 marks (\$16,399,152).

This system was not found to be satisfactory for much the same reason as the first one—the inadequate revenue collected therefrom as well as the partiality shown the sugar industry by fostering the export at the expense of home consumption.

The third system—provided for under the law of 1891—abolished the tax upon beets and increased that upon sugar to 18 marks (\$4.28) per double centner. The export bounties were considerably reduced, averaging perhaps 1.60 marks (38 cents) per double centner (220 pounds) for the three kinds of sugar. A further reduction was also made in 1895 to about 1.35 marks (32 cents) per double centner.

In 1896 a law was passed more than doubling the export premiums and increasing the tax upon sugar to 20 marks (\$4.76) per double centner. In addition thereto two important features were also introduced, namely, the so-called Betriebssteuer, which taxed larger factories heavier in proportion than the smaller ones, the taxes being levied upon the amount of sugar produced, and the Contingentierung, limiting the annual production of beet sugar. These measures were adopted in order to protect small factories against the competition of the larger ones, as well as to prevent the possibility of an overproduction. The financial result of this system for the year 1901-2 may be seen from the following figures:* Total taxes collected, 144,332,000 marks, (\$34,351,016); total export bounties 40,739,000 marks (\$9,695,882); net proceeds, 103,593,300 marks (\$24,655,205).

For the thirteen months beginning August 1, 1902, and ending August 31, 1903, the financial results were as follows: Taxes collected, 154,939,000 marks (\$36,875,482); total export bounties, 37,346,000 marks (\$8,888,348); net proceeds, 117,593,000 marks (\$27,987,000). The year is made to end with August 31 to conform to a provision of the Brussels sugar convention.

*Statistisches Jahrbuch für das Deutsche Reich, 1903, p. 229.

The general character of the beet-sugar industry does not appear to have undergone any considerable change since the introduction of this third system of taxation. Compared with England and the United States, the consumption of sugar per capita is very small in Germany, as well as in other European countries. Indeed, some assert that it would be well for the people were they to take more of the nourishment sugar affords. Perhaps one of the results of the Brussels convention, abolishing export bounties in the countries of the contracting parties, which went into effect on the 1st of September, 1903, will be to lower the price of sugar and thus increase the home consumption.*

BRAINARD H. WARNER, Jr.,
Consul.

LEIPZIG, GERMANY, *December 2, 1903.*

SUGAR STATISTICS OF EUROPE.

The following statistics were compiled by the syndicate of French sugar manufacturers from replies to inquiries:

Country.	Number of re-sponses.	Number of factories active.		Beets consumed.		Production of raw sugar.	
		1903-4.	1902-3.	1903-4.	1902-3.	1903-4.	1902-3.
				<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
France.....	236	296	319	6,441,500	6,266,900	778,200	823,600
Germany.....	378	384	390	12,576,000	11,255,900	1,897,300	1,750,600
Austria-Hungary.....	208	215	216	7,775,500	7,130,000	1,162,900	1,050,900
Belgium.....	97	100	100	1,546,000	1,441,000	199,200	200,000
Denmark.....	7	7	7	386,000	303,000	48,000	37,000
Holland.....	26	29	24	935,800	711,900	123,200	102,400
Russia.....	345	275	277	7,712,200	8,852,800	1,160,600	1,169,600
Sweden.....	16	16	16	746,800	505,000	106,380	73,400
Italy.....		33	33	1,050,000	1,000,000	130,000	100,000
Switzerland.....	1	1	1	11,000	13,000	1,454	1,600
Total.....	1,214	1,356	1,383	39,180,800	37,479,500	5,607,234	5,309,100

The French statistics do not include molasses. The German statistics contain sugar other than beet sugar for 1903-4 (125,000 tons) and for 1902-3 (115,000 tons). The figures for Italy were secured by private information.

*The excise tax on sugar was reduced to 14 marks per double centner on September 1, 1903.

World's production of beet and cane sugar and average price per pound from 1871 to 1903.

Year.	Beet.	Cane.	Total.	Price.
	Tons.	Tons.	Tons.	Cents.
1871-72	1,020,000	1,599,000	2,619,000	5.37
1872-73	1,210,000	1,793,000	3,003,000	5.35
1873-74	1,288,000	1,840,000	3,128,000	4.95
1874-75	1,219,000	1,712,000	2,931,000	4.35
1875-76	1,343,000	1,590,000	2,933,000	4.04
1876-77	1,045,000	1,673,000	2,718,000	4.91
1877-78	1,419,000	1,825,000	3,244,000	5.06
1878-79	1,571,000	2,010,000	3,581,000	4.16
1879-80	1,402,000	1,852,000	3,244,000	4.18
1880-81	1,748,000	1,911,000	3,659,000	4.41
1881-82	1,782,000	2,060,000	3,842,000	4.41
1882-83	2,147,000	2,107,000	4,254,000	4.37
1883-84	2,361,000	2,323,000	4,684,000	3.61
1884-85	2,545,000	2,351,000	4,896,000	2.67
1885-86	2,223,000	2,339,000	4,562,000	2.84
1886-87	2,733,000	2,345,000	5,078,000	2.5
1887-88	2,451,000	2,465,000	4,916,000	2.75
1888-89	2,725,000	2,263,000	4,988,000	3.21
1889-90	3,633,000	2,069,000	5,702,000	3.28
1890-91	3,710,000	2,555,000	6,265,000	3.03
1891-92	3,501,000	2,852,000	6,353,000	2.93
1892-93	3,428,000	3,045,000	6,473,000	3.09
1893-94	3,890,000	3,490,000	7,380,000	2.92
1894-95	4,792,000	3,530,000	8,322,000	2.15
1895-96	4,315,000	2,830,000	7,155,000	2.29
1896-97	4,954,000	2,864,000	8,818,000	2.01
1897-98	4,872,000	2,898,000	7,770,000	2.55
1898-99	4,977,000	2,995,000	7,973,000	2.39
1899-1900	5,510,000	2,904,000	8,414,000	2.49
1900-1901	6,067,000	3,650,000	9,717,000	2.28
1901-2	6,923,000	4,063,000	10,986,000	1.81
1902-3	5,752,000	4,145,000	9,897,000	1.71

RAPID TYPE-PRINTING TELEGRAPH.

(From United States Consul-General Guenther, Frankfort, Germany.)

The International Economist, of Berlin, of December 9 contained a report of a lecture by Mr. William von Siemens before the Electrical Society with reference to a new rapid type-printing telegraph, which has been constructed by Siemens & Halske.

The apparatus belongs to the species of so-called automatic telegraphs, where the telegram is prepared in such a manner that, with an apparatus similar to a typewriter, holes are punched in a continuous paper tape for every letter to be telegraphed. This paper tape then runs through the rotating telegraph instrument and automatically sends corresponding currents over the wire.

As this Siemens & Halske apparatus sends the large number of 2,000 letters per minute over the wire, while a single operator, even with the best auxiliaries, can not send more than 200 or 300 letters in the same time, it is possible in this way to send telegrams

from quite a number of operators over one wire. For every letter the apparatus punches two holes in the tape and directly over them the letter is printed in ordinary type, so that the perforated tape contains a perfectly legible telegram. It is possible to have the perforation done by the public and the tape sent to the telegraph office.

From the receiving apparatus the tape comes, with the same speed, ready to be pasted upon the telegram blanks and also contains the telegram in common type.

In order to make it possible to print 2,000 letters per minute without the use of sensitive mechanical apparatus the electric spark is used.

A disk in which the separate letters are stenciled rotates with 2,000 revolutions per minute between a spark current and a moving tape of prepared photographic paper. Every time a spark passes over, a photographic picture of a letter which happens to be in front of the spark current is thrown upon the tape. It is to be noticed that the spark must occur with an exactness of the forty-thousandth part of a second in order to make the proper letter appear in its proper place. The paper tape runs through some little sponges saturated with the photographic developer and the "fixing" solution. The photographic process is completed in nine seconds and the tape comes out printed.

The problem of causing the spark to occur with the utmost precision was solved through a liberal use of the property of electric condensers to load and unload themselves in very short intervals. In this manner the mechanism of the apparatus was so simplified that the receiver, aside from the photographic device, appears simply as a spindle moved by an electromotor, upon which, in addition to the type disk already mentioned, only a few brushes are fastened, which glide over the contact plates.

There are also five relays of a peculiar construction, the tongues of which follow the rapid impulses with sufficient speed. A very ingenious device so regulates the operation of the machine that the receiving apparatus in a given time makes exactly the same number of revolutions as the apparatus which sends the currents.

Experiments over wires of the federal telegraph have demonstrated the practicability of the system over greater distances. Its simplicity of mechanism and consequent reliability furnishes the best chance for its use.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *December 11, 1903.* *Consul-General.*

PREVENTION OF FIRES FROM LOCOMOTIVE SPARKS.

(From United States Vice and Deputy Consul-General Mason, Berlin, Germany.)

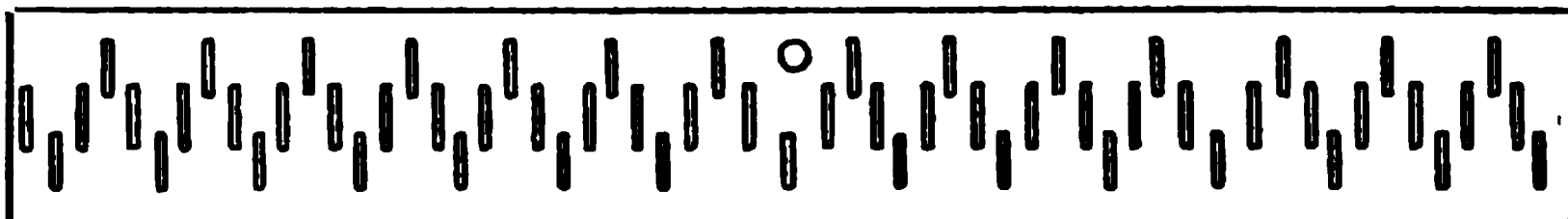
The constant danger of widespread and disastrous forest fires and other conflagrations and the deplorable losses of property and life which occur each year from such causes in the United States lend a practical interest to the best methods employed in other countries for averting similar dangers.

Forest fires in Germany are comparatively infrequent for three reasons: First, the country has a rainfall so copious and uniform that periods of drought which render woodlands easily inflammable are relatively rare; second, where railways traverse tracts of pine forests strewn with the dry, fallen needles of the previous year, they are generally ditched and diked along both sides of the line so as to confine a fire to a small and easily controlled area; and, third, because every precaution which inventors can devise to arrest locomotive sparks and prevent them from escaping into the open air is practiced on the State railways and enforced on all private and corporate lines.

Until recently it was not apparent that the German engines were in this respect much, if any, in advance of those in other countries. The problem here, as elsewhere, has been to devise a metallic network fine enough in mesh to effectively sift the glowing sparks from the blast of a locomotive without so obstructing the draft as to compromise its steaming capacity. Hitherto the bars or filaments of network spark arresters have been mainly round and fixed in place—conditions which always entail more or less danger of choking and clogging whenever the space between bars or meshes is small enough to really prevent the escape of sparks and glowing embers of dangerous size.

These requirements have led to an ingenious improvement invented by a German engineer named Heydemann. It has been in use during the past two years on the State railways of Mecklenburg with such success that it has been adopted for trial on the Hessian and several corporate lines, and has become therefore a subject of current public interest. The device consists of a series of three grates set one above another in a square iron or steel frame of such size and form as to fit into the smoke chamber of the locomotive. The arrangement of the three tiers of grate bars will be shown by the accompanying illustration.

Each bar is about 2 inches wide by one-tenth of an inch thick, and is ingeniously set into the frame so as to be held in place against any shock or pressure and at the same time to be free to expand or contract with changing temperatures. As shown by the diagram the middle tier or grate contains twice as many bars as the top and bottom tiers, and the arrangement of bars and spaces is such that while a free passage is secured for the gases of combustion no spark or ember more than 0.16 inch in thickness can escape, and these are so small that they are self-extinguished within a few



feet after escaping into the open air and cause no danger. This ingenious arrangement of the bars, together with the readiness with which they expand and contract under varying temperatures, acts to dislodge the adhering particles and prevents the arrester from becoming clogged, at the same time permitting a draft so open and free that the steaming capacity of the engine is said to be visibly greater than with any other type of spark catcher heretofore used in this country.

DEAN B. MASON,
Vice and Deputy Consul-General.

BERLIN, GERMANY, *December 14, 1903.*

HINTS ON LEATHER EXPORTING.

Das Handels-Museum, official organ of the Austrian Government, prints the following notes:

The Austrian consul in Berlin reports that the tanning industry of Germany still remains unsatisfactory, owing to high prices for raw material. In November the German tanners' union increased the price of different kinds of leather \$1.15 to \$2.38 per 110 pounds.

The Austro-Hungarian chamber of commerce in Constantinople reports:

Considerable leather is imported into Turkey via Constantinople. France furnishes sole leather from South American hides; Italian sole leather is cheaper; that from Hungary has a good demand. Next comes leather from near-by tanneries, as Chios and Aivali. From India and the Argentine come raw hides. Calf leather and patent leathers come mostly from France, as do also white leather; other sorts come from Germany. Leather for boots is of Austrian origin; kid leather comes from France; sheep leather, from France and Germany. Shoemaking in Tatavla and Stamboul is increasing. While there is some market for European styles, most of the trade is in the various kinds of native shoes, as tscharuks, a kind of coarse sandal, and yemeni, a sandal without heel parts.

The German consul at Damascus reports:

During the last few years the Turkish leather industry has grown considerably. In 1902, in the tanneries of Lebanon and El Maschghara there were manufactured 132,276 pounds of sole leather, while only 26,455 pounds were used of French and Italian leather; 2,976 pounds of patent leathers were made, against 744 pounds from France and Austria-Hungary. Colored calf and colored kid leather are imported from Germany. Fine shoes, for women and children, from Switzerland and Vienna, were imported last year to the value of \$7,140.

The German consul at Canea reports:

There is a growing demand for leather in Crete. Good sole leather is obtained from France, although Austria and Italy furnish cheaper qualities. Bright-colored calf leather for summer shoes is furnished by Germany, as is also leather for book-binding. Vienna sends various leather wares, as pocketbooks, cigarette cases, etc.

The French consul at Bombay reports that British India imports shoes annually to the value of \$681,000, mostly from England.

Persia secures its supplies of shoes mostly from the United States, India, and France. The careless handling of packages en route to the interior of Persia demands the best methods of packing, and packages should not weigh over 154 pounds each.

GERMAN PATENT OFFICE.

(From United States Consul-General Guenther, Frankfort, Germany.)

The Frankfurter Zeitung of December 6, 1903, says:

The German patent office is overwhelmed with work. The number of applications for patents is still increasing. It was 27,565 in 1902 and will be about 29,000 in 1903 and 30,000 in 1904.

Trade-mark applications for the last few years show an increase also. They were 9,924 in 1901, 11,168 in 1902, and will be about 12,000 in 1903. A further increase for 1904 is expected. Of the present five directors of the patent office four are lawyers and one a technologist.

Another director is to be added. His duties shall be principally to assist the president of the board of directors with reference to the technical personnel of the office, as well as to the general technical matters of the office, which, on account of the close relations of the patent office to the industries, are constantly becoming more important.

Seventy-two technical clerks are at present employed in the examination of patent applications. In consequence of the great work involved in the examination of the steadily increasing material, this force has become inadequate. An increase of nine technical clerks is necessary.

In the two divisions for trade-marks there are at present, in addition to the two chairmen, five law and five technical experts and five assistant law referees. The necessity has arisen to increase the lawful organization of the division through additional members and cut off some of the assistants who can only take the place of a member to a limited degree.

For 1904 two new lawyer members are required.

RICHARD GUENTHER,
FRANKFORT, GERMANY, *December 7, 1903.* *Consul-General.*

PREVENTION OF ACCIDENTS FROM AGRICULTURAL MACHINERY.

(From United States Consul-General Guenther, Frankfort, Germany.)

The last number of the German Review contains an article with reference to accidents from agricultural machinery, from the pen of Prof. Dr. von Bruns, the director of the surgical clinic at Tuebingen.

He arrives at the conclusion that a much larger number of injuries is caused by agricultural machinery than is commonly supposed, and he especially furnishes proof that such accidents are most frequently sustained by children and youthful persons.

During the last four years more than 200 injuries were treated at the surgical clinic at Tuebingen, of which 176 were caused in feed-cutting machinery. Of these 176 persons, 35 were from 1 to 6 years old and 67 between 6 and 16 years. Almost two-thirds of the injured had not completed the sixteenth year. A statistical table in 1891 with reference to injuries from agricultural machinery shows that of 19,918 accidents, 8,177—over 40 per cent—were due to defective machinery and lack of proper safeguards. The same causes with reference to accidents from industrial machinery were only attributable to 28 per cent of the injured (statistics of 1887). Preventive measures against accidents are therefore urgently demanded with reference to agricultural machinery. Up to the year 1894 about 33,000 persons had met with accidents from such machinery.

Professor von Bruns demands that better preventive measures shall be taken and that the employment of children on machinery shall be prohibited.

It would seem to be advisable, in addition, to prohibit adults from allowing children under a certain age from being around such machinery at all.

RICHARD GUENTHER,
Consul-General.

FRANKFORT, GERMANY, *November 28, 1903.*

GERMAN VINTAGE OF 1903.

(From United States Consul Schumann, Mainz, Germany.)

The wines of this year's vintage are at present undergoing fermentation; some have in fact already passed this period, and on the whole the wine producers of Germany may well be satisfied with the results. The vintage of 1903, both as to quality and quantity, is fairly good.

Wine growing in Germany is somewhat similar to peach growing in the United States. From the budding period in early spring until

the grapes are gathered in the fall, hardly a week passes that does not bring the news that, owing to frosts, continued rains, drought, ravenous insects, etc., the entire crop is either seriously menaced or almost totally destroyed, a lament in which the wine growers join; and yet when at length the must is in the casks, as a rule, a better quality and a greater quantity have been harvested than was expected. The prices obtained for most of the new vintage in the wine-growing localities of the German Empire were approximately as follows:

Rhenish Hesse:

Inferior localities.....per 316.8 gallons... \$54. 74 to \$66. 64

Medium localities.....do..... 71. 40 to 95. 20

Good localities.....do..... 107. 10 to 142. 80

Rheingaudo..... 119. 00 to 142. 80

Nahe Valley:

Inferior grades.....do..... 57. 12

Middle grades.....do..... 71. 40 to 83. 30

Better grades.....do..... 83. 30 to 107. 10

Wurttembergdo..... 104. 72 to 152. 32

Middle Rhine.....per 264 gallons... 52. 36 to 61. 88

Moselle Valley:

Upper Moselle.....do..... 47. 60 to 59. 50

All other.....do..... 95. 20 to 119. 00

Saar and Ruhr Valley.....do..... 107. 10 to 130. 90

Haardt Hills:

Middle Haardt.....do..... 71. 40 to 100. 40

Upper Haardt.....do..... 47. 60 to 55. 93

Lower Haardt.....do..... 61. 88 to 71. 40

Franconia.....do..... 59. 50 to 88. 06

Badendo..... 57. 12 to 66. 64

Alsace-Lorrainedo..... 59. 50 to 90. 44

In Silesia grapes sold for \$19.04 to \$22.61 per 550 pounds.

WALTER SCHUMANN, *Consul.*

MAINZ, GERMANY, *December 2, 1903.*

GERMANY'S PETROLEUM SUPPLY.

(From United States Consul Monaghan, Chemnitz, Germany.)

The importance of petroleum as an article of commerce in Germany is shown by the following figures showing the comparative importance of related articles of daily consumption: In 1900 the per capita consumption of petroleum was 46 pounds; of salt, 39.6 pounds; of sugar, 27.03 pounds; of herring, 7.91 pounds; and of coffee, 6.62 pounds.

The value of the wholesale sugar trade conducted in 1900 was \$60,283,734, including duties and other taxes; petroleum, \$48,273,778; salt, \$14,276,192. The annual total consumption of petroleum

now aggregates the enormous figure of 264,180,000 gallons, 90 per cent of which is at present supplied by the Standard Oil Company. Practically the entire trade in this commodity, as far as Germany is concerned, is therefore in the hands of the Standard Oil Company.

Germany has for many years been watching with apprehension the growing influence of the Standard Oil Company and is at present putting forth every effort to find some source for effective competition. Figures apparently are against her, but judging from numerous articles which recently appeared in leading papers all over the country she bases her hopes largely on the development of the other great oil fields of the world, particularly Russia, Austria-Hungary, and Roumania.

German writers point out, with unveiled satisfaction, the fact that the Standard Oil Company has been losing ground in the world's market, and that the United States is annually producing a smaller percentage of the world's supply of petroleum. The following figures taken from *The Thirty Years' Petroleum War* (Brackel and Leiss), a book which created a sensation at the time of its publication some months ago, are of interest in this connection in that they show clearly the development of the other prominent oil fields of the world within recent years:

Year.*	United States.	Russia.	Austria-Hungary.	Roumania.	Germany.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1859	264	.....	.....	.....	.....
1860	66,000	5,000	.....	3,613	.....
1870	694,418	28,728	.....	10,590	.....
1875	1,605,452	136,240	.....	15,100	781
1885	2,885,360	1,904,380	.....	22,000	5,815
1888	3,644,787	3,183,418	64,824	30,400	11,920
1891	7,166,541	4,756,568	87,717	50,690	15,315
1894	6,513,476	5,161,707	132,000	64,530	17,232
1895	6,981,780	7,056,537	214,810	76,000	17,051
1897	7,982,768	7,831,636	309,626	110,000	23,303
1899	7,554,928	8,961,067	316,384	250,000	27,027
1900	8,329,279	9,833,820	326,334	250,000	50,375
1901	9,158,373	11,242,249	452,200	270,000	44,095

*According to United States statistics the petroleum production of 1902 was 80,894,590 barrels, against 69,389,194 barrels in 1901. During the same period Russia fell off from 85,168,556 barrels to 80,540,045 barrels, thus yielding first place to the United States. The world's production in 1902 was 177,231,900 barrels (an increase of 7 per cent over 1901) divided as follows: United States, 45.64 per cent; Russia, 45.44 per cent; Sumatra, Java, and Borneo, 3.31 per cent; Galicia, 2.35 per cent; Roumania, 1.16 per cent; and for the rest of the world, 2.1 per cent. To Texas and California's new fields is due the credit for the United States taking first place.

In 1902 Russia supplied 11,500,000 tons, or 51 per cent of the world's production of petroleum; the United States produced not quite 10,000,000 tons, or 41.1 per cent of the world's production; while

the rest was divided between Galicia, a Province of Austria, with 573,440 tons; Roumania, with 320,000 tons; Sunda Islands, with 380,000 tons; India, with 180,000 tons; Japan, with 120,000 tons; Germany, with 50,000 tons; South America, with 15,000 tons; and Italy, with 2,800 tons.

With these figures as a basis German writers think Russia might offer successful competition to the Standard Oil Company. But Russia finds it to her advantage to work in harmony with the American firm, as the two can easily control the world's market and, through fidelity to their agreement, fill the coffers of both. Russia therefore can not be appealed to in the struggle of Germany to escape from the grasp of the Standard Oil Company. Hence there remains no alternative but to turn to the next best competitors whose sympathy may be with Germany. Austria-Hungary and Roumania are therefore looked to as rescuers. Galicia, a Province lying on the northeast boundary of Hungary and bordering on Russia and Silesia, with an output of 573,440 tons in 1902, and Roumania, with 320,000 tons—both countries with immense undeveloped oil fields—offer great opportunities for the future.

ROUMANIAN OIL FOR GERMANY.

Much hope is placed in the development of the Roumanian oil fields. They are valued at \$3,860,000,000 by a Roumanian engineer. In 1899 one well alone is reported to have produced 70 wagons of oil per day for a period of thirty-three days. The oil fields lie at no extraordinary distance from Germany. The Danube offers ideal river transportation into the heart of German territory. The cost of production of 220.46 pounds of refined Roumanian oil is estimated at 3 francs (57.9 cents), a price with which, it is claimed, no other country can compete. Moreover, the Roumanian crude oil produced 61.3 per cent of refined oil, while the Pennsylvania oil is claimed to produce but 47 per cent.

An interesting estimate was made as to the relative cost of 100 kilograms (220.46 pounds) of oil delivered at Hamburg from America, Russia, and Roumania, in which the Roumanian oil figures most favorably. The estimate was as follows:

	Francs.	
Cost of 100 kilograms of refined oil at Philadelphia.....	5. 87=	\$1. 1329
Sea freight to Hamburg.....	1. 20=	. 2316
Cost delivered at Hamburg.....	7. 07=	1. 3645
Cost of 100 kilograms of refined oil at Batum, Russia.....	4. 85=	. 936
Sea freight to Hamburg.....	1. 50=	. 2895
Cost delivered at Hamburg.....	6. 35=	1. 2255

Cost of 100 kilograms refined oil at harbor of Con-	
stanza (from Roumania):	
	Francs.
Crude oil.....	2. 00= \$0. 386
Refining.....	1. 00= . 193
Freight to Constanza.....	. 70= . 135
	3. 70= . 714
Sea freight to Hamburg.....	1. 25= . 241
Cost of Roumanian oil at Hamburg.....	4. 95= . 955

From these figures it would seem that Roumania has decidedly the advantage in competition with Russian and American oil. The present difficulty, of course, is the small production of the Roumanian fields when compared with the millions of tons placed upon the market by Russia and the United States.

AUSTRIAN PETROLEUM FOR GERMANY.

Reference has already been made to the rapid development of the Austrian oil fields during the last few years. In 1902 573,440 tons were produced. So rapid has been the increase that the Austrian markets have been overcrowded. It is estimated that a surplus of 400,000 meter centners, or 40,000 tons, was at hand the last year. Recently the German Bank at Berlin came forward and offered to buy up the entire surplus and use the same in beginning competition against the Standard Oil Company. This, of course, is impossible with the Austrian surplus alone; but it is proposed to establish centers in various parts of Germany, under the auspices of the German Bank, and then distribute the oil. Relations have also been established, according to reports, with the Austrian Bank-Verein and the Hungarian Bank with the view of enlisting these institutions in favor of a campaign against the Standard Oil Company. The project finds universal support in Germany, while Austria also has expressed herself ready to do all she can to help the undertaking along; in fact, the Austrian Government has itself come to the rescue of the Galician producers. It is hoped that the banking institutions interested in the campaign against the American oil will succeed in controlling at least 18 per cent of the total amount consumed in Germany, an amount which is deemed sufficient in organizing an effective war against American oil.

J. F. MONAGHAN, *Consul.*

CHEMNITZ, GERMANY, *December 5, 1903.*

CONDITIONS IN GERMANY IN 1903.*

(From United States Consul Ozmun, Stuttgart, Germany.)

The general business situation in Germany for the past nine months has been a battle royal for existence. Never since modern machinery and modern methods of business have been employed has there been such fierce competition and such small profits, and each manufacturer and jobber has been forced by stern necessity to put more energy and more study in his business to keep pace with the strenuous commercial tendency of the times. Had it not been for a few fortunate circumstances the result would have been bad indeed. A succession of good crops, quite above the average, was perhaps the greatest factor toward commercial safety, and its good results upon trade has been shown in the increased consumption of not only table necessities, but table luxuries, which latter increased twofold over 1901, and a noticeable gain in consumption of meat and tobacco. Prices for cattle and grain have been good, but these are not as significant or important indications of prosperity as they were a decade ago.

The large purchases of iron and steel for the United States and the strikes of miners and other industrials in the United States contributed to assist the German manufacturer to dispose of his product upon a world which is rapidly becoming seriously oversupplied and overexploited in the headlong race for markets, where great combinations of capital in trusts and cartels, with immense labor-saving devices, distribute their products by modern methods of land and water transportation to the remotest corners of the earth in ever vastly increasing quantities. The general prosperity in the United States, peace in South Africa, and the end of the tariff battle in the Reichstag, though less important, were, nevertheless, fortunate circumstances which contributed considerable in sustaining the commercial activity in Germany.

Perhaps the most significant signs of improvement were the increase in the savings-bank deposits, the decrease in failures, the increased earnings of all the railways, and the decrease in the number of persons out of work.

The principal features of the financial world in Germany were a low interest rate, small business in stocks, and a large business in safe investment securities, to which capital—made timid by the disastrous speculation in great market uncertainties—turned, with characteristic conservatism, to the less remunerative but much safer

* Extract from the annual report of Consul Ozmun, which will be published in full in *Commercial Relations for 1903*.

bonds and mortgages of responsible institutions. But even investments of this character did not, in some remarkable instances, receive the expected support, as the Imperial German Government 3 per cent bonds, which were oversubscribed ten times at 92, declined to 89.25 and Wurttemberg 3½ per cent government bonds, recently floated and oversubscribed at 100.75, declined to 99.50.

The general tendency toward large capitalization was shown by certain statistics not long since published. In 1902 (statistics for a portion of 1903 not attainable) there were fewer stock companies formed than in any year since 1891, but, notwithstanding that, the capitalization of these companies was higher than in any one of the years from 1891 to 1894, inclusive.

EDWARD H. OZMUN, *Consul*.

STUTTGART, GERMANY, *October 23, 1903.*

GERMAN TRADE AND INDUSTRIAL STATISTICS.

(*From United States Consul-General Guenther, Frankfort, Germany.*)

Iron production.—The Association of German Iron and Steel Manufacturers estimates the total production of raw iron in the German Empire, inclusive of Luxemburg, for the month of October, 1903, at 869,463 metric tons; for the month of September, 1903, at 648,889 metric tons. For the ten months ended October 31, 1903, the production was 8,349,056 metric tons, against 6,917,737 metric tons for the same period of 1902.

Imports and exports.—The German imports for the first ten months of 1903 amounted to 37,375,564 metric tons, against 36,185,636 and 34,718,722 metric tons for the corresponding periods of 1902 and 1901. The exports for the same time were 29,744,150 metric tons in 1903, against 28,602,602 and 26,551,153 metric tons in 1902 and 1901. The imports, therefore, exceeded the exports by 7,631,414 metric tons in 1903, against 7,583,034 and 8,177,569 metric tons for the corresponding periods of 1902 and 1901. The exports so far this year are the largest ever known for ten months of any year.

Incandescent electric lamps.—The most expensive material for the manufacture of incandescent electric lamps is platinum wire. Aside from its high cost it would also be desirable to dispense with the use of platinum for such lamps, as this precious metal is very scarce and urgently needed for other purposes. For incandescent lamps platinum is especially adaptable, as its expansion by heat is the same as that of glass and therefore changes of temperature cause no bad results. When platinum is melted into the glass, both materials

adhere to each other as if cemented. According to the Electrical Engineer, a company has been formed in France which will utilize a peculiar cementing process by which the use of platinum will become superfluous.

RICHARD GUENTHER,
Consul-General.

FRANKFORT, GERMANY, *November 27, 1903.*

GERMAN-ARGENTINE TRADE.

The Yearbook of the Imperial Statistical Bureau gives the following figures as the total imports and exports of Germany for the years 1893 and 1902:

Description.	1893.	1902.
Imports	\$983,915,800	\$1,381,780,400
Exports	772,214,800	1,145,456,400

Among the South American states dealing with the German Empire the Argentine Republic held the first place in exports in 1902, as is shown by the following table, in which a comparison is also made with Brazil, Chile, and Uruguay:

Imported from—	1893.	1902.	Exported to—	1893.	1902.
Argentine Republic..	\$22,141,140	\$48,028,400	Argentine Republic..	\$10,115,000	\$11,233,600
Brazil	30,011,800	28,226,800	Brazil	14,803,600	10,424,400
Chile	18,575,900	26,894,000	Chile	6,735,400	7,687,400
Uruguay	1,915,900	2,877,420	Uruguay	1,951,600	2,808,400

The figures for the different articles imported into Germany from the Argentine Republic follow:

Article.	1902.	1899.
Wool.....	\$18,397,400	\$24,014,200
Salt hides.....	6,402,200	5,021,800
Dry hides.....	642,600	785,400
Wheat	4,950,400	7,735,000
Flax	5,021,800	1,094,800
Corn	5,641,000	2,495,200
Quebracho wood.....	1,951,600	952,000
Skins.....	1,689,800	833,000
Bran	1,094,800	880,600
Horsehides.....	880,600	690,200
Sheep hides.....	476,000	214,200
Entrails.....	357,000	95,200
Quebracho extract.....	238,000	166,600
Horsehair	214,000	190,400

Exports from Germany to the Argentine Republic for the same period were as follows:

Article.	1902.	1899.
Woolen fabrics.....	\$380,800	\$571,200
Colored cottons.....	833,000	809,200
Hosiery	261,800	285,600
Angle iron and corner iron.....	119,000	71,400
Foundry bars.....	357,000	71,400
Iron wire.....	761,600	785,400
Fine ironware.....	333,200	261,800
Coarse ironware.....	904,400	642,600
Pictures	238,000	119,000
Wool yarn.....	119,000	285,600
Weapons.....	928,200	856,800
Gold and silver wares.....	928,200	261,800
Pianos	195,200	142,800
Haberdashery.....	142,000	47,600
Machinery	95,200	.....
Paper wares.....	214,200	142,800
Toys	166,600	166,600
Printing paper.....	142,800	166,600
Rice.....	190,400	261,800

For the fiscal year ended June 30, 1902, the imports from the Argentine Republic to the United States were \$11,120,721; the exports from the United States thither amounted to \$9,801,804.

GERMAN TRADE NOTES.

(From United States Consul Warner, Leipzig, Germany.)

Bridges for China.—Die Vereinigte Königs und Laurahütte Aktiengesellschaft, of Berlin, a company with a capital of 27,000,000 marks (\$6,426,000) and a bonded indebtedness of 10,000,000 marks (\$2,380,000)—one of the largest of its kind in Germany—is reported to have just received orders from China for a number of iron bridges varying from 17 to 310 yards in length. The bridges, some of which will have a span of 90 yards between piers, are all intended for the railroad lines that are being built.

Incandescent lamps for Edinburgh.—A firm located at Cologne has just received an order from the city council of Edinburgh, Scotland, for 10,000 incandescent lamps. It is reported that 34 firms submitted bids upon this order.

American Tobacco Company.—The George A. Jasmatzi Aktiengesellschaft, in Dresden, which is under the control of the American Tobacco Company, of New Jersey, has decided to increase its capital from 1,500,000 marks (\$357,000) to 5,000,000 marks (\$1,190,000). In spite of bitter competition this company, by selling good Turkish tobacco cigarettes at moderate prices, has considerably increased

its business since it was taken over on January 1, 1901, by the American company.

New coal mines in Saxony.—The Saxon government, now that it has been found necessary to discontinue the Freiberg mineral mines within the next ten years, intends to open up, immediately, brown-coal mines near Leisnig, which in 1904, it is estimated, will have an output of 104,000 metric tons.

Frankfort improvements.—The Frankfort city council has just received permission to make a 27,000,000-mark (\$6,426,000) bond issue. The rate of interest will be between 3 and 4 per cent. This money will be spent in making municipal improvements, a large part of which will be expended upon public buildings.

Locomotive exports.—German locomotive factories have of late been very successful in obtaining foreign orders. The Italian Southern Railway is having a number of locomotives built in this country. The Hohenzollern Aktiengesellschaft, of Düsseldorf-Grafenberg, is now engaged in building ten for that road. The Japanese Government, which is to spend a large amount within the next three years in the construction of railroads, has also bought locomotives in the German market. Six locomotives are now on their way to Boston. They are to be tried on the Canadian roads, and go to make up a trial order, being perhaps the first German locomotives ever exported to America. During the year 1903 German locomotives have been sold in British India, Spain, Italy, Holland, the East Indies, Denmark, and the Sudan, Africa, in addition to the countries before mentioned, as well as in other lands.

To improve railroad cars.—The Royal Prussian State railroads are making experiments upon a number of passenger coaches, not only as regards construction, but respecting furnishings and heating as well. The floors of the fourth-class coaches are also to receive attention. The experiments, to some extent at least, will be patterned after the modern American railway coaches. The Royal Saxon railroads are considering the advisability of substituting heavier rails for those now in use.

New cement factory.—Herr Kommerzienrat Manske has decided to erect a cement factory on his property, which is located at Hardeggen, in the Province of Hanover. It is reported that the efforts which are now being made, perhaps more actively than ever before, to form a cement syndicate will most probably be successful. The principal object of the syndicate will be to increase prices.

BRAINARD H. WARNER, Jr.,
LEIPZIG, GERMANY, November 20, 1903. Consul.

GERMAN MACHINE-BUILDING TRADE.*

(From United States Consul Monaghan, Chemnitz, Germany.)

The past year was largely unsatisfactory with the Chemnitz machine builders. The market was weak throughout, few orders coming in, and these when placed were obtained at such a sacrifice in the face of strong competition that with the most economical management possible but little profit remained.

The great Saechsische Maschinenfabrik, of this city, has, according to a report of the local chamber of commerce, lived through an unsatisfactory year—a year which apparently was quite typical of the machine industry of the entire Empire, as this concern builds machines of all classes. One of its most important departments—locomotive building—suffered considerably through the falling off in orders from the Saxon Government Railroad. The Saxon railroads find themselves in a most embarrassing condition financially, because of the extravagant expenditures in the construction of new depots, branch lines, etc., during the last two years. In the present attempt to right the straightened conditions the orders for new locomotives were considerably reduced, the local machine works suffering heavily as a result. Foreign orders also were few and far between. This concern is, however, at present engaged in building 30 locomotives for Canada, the Saechsische Maschinenfabrik having obtained this considerable contract in competition with the strongest English and American bidders.

It is an interesting fact, in this connection, that the headlights for these locomotives were manufactured in Ohio and were shipped to Chemnitz during the close of the year 1902, where, I am sorry to report, they arrived in poor condition because of neglect or ignorance in the packing. In the steam-engine and boiler-building industry the year also closes with disappointment. The renewed activity which was looked for did not materialize. Orders were few and deliveries frequently made at a figure but slightly above the cost of production. The same story is told in the machine-tool-manufacturing industry. The market for textile machinery seems to be improving at present. Not only are shipments to the United States more frequent and heavier than at any other period during the past year, but other foreign markets are also reported to be quite active. The dividends paid by one large local concern at the close of the year

*Extract from Consul Monaghan's annual report, which will appear in full in *Commercial Relations for 1903*.

1902 showed a comparatively prosperous year, and since this concern is interested mainly in the manufacture of textile machinery we find here a fair reflection of the improved conditions in this industry.

J. F. MONAGHAN, *Consul*.

CHEMNITZ, GERMANY, *October 8, 1903.*

COAL TRADE OF ITALY.

(From United States Consul-General Hughes, Coburg, Germany.)

The importation of coal and coke into Italy during the first nine months of 1903 amounted to 4,201,283 tons, valued at \$21,082,038, against 4,189,346 tons, valued at \$21,022,132, during the same period of 1902—an increase in quantity of 11,937 tons and in value of \$59,900.

During the first nine months of the last four years the countries from which Italy imported her coal supply were as follows:

Country.	1900.	1901.	1902.	1903.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Great Britain.....	3,352,683	3,243,021	3,971,925	3,956,603
Austria-Hungary.....	123,585	94,932	103,483	120,043
Germany	30,507	35,334	43,315	60,458
France.....	14,455	16,887	27,072	26,920
Belgium	8,067	6,287	22,267	10,074
All other countries*.....	91,910	128,858	21,284	27,185
Total	3,621,207	3,525,319	4,189,346	4,201,283

* During the past three years the export of coal to Italy was as follows: In 1900, 77,859 tons; 1901, 182,152 tons; 1902, 146,279 tons.

The exportation of coal and coke from Italy during the first nine months of 1903 amounted to 19,756 tons only, valued at \$99,136, as against 22,537 tons, valued at \$113,091, in the same period in 1902.

OLIVER J. D. HUGHES,

COBURG, GERMANY, *November 16, 1903.*

Consul-General.

IRON WORKS OF RUSSIA.

Stahl und Eisen, Düsseldorf, in its issue of November 1, 1903, says:

The beginning of the Russian iron industry goes far into the past. The rich deposits of the Urals have been turned into account for a hundred years, but even yet are far from being exhausted. The first modern iron works is that of Nikolai Putilov, founded in 1801. It is not only one of the greatest in Russia, but also in Europe, ranking with Creusot in France, Armstrong in England, and Cockerill

in Belgium, being surpassed only by Krupp. The following table gives the leading iron works in Russia, with number of men employed and year founded:

Name of works.	Year founded.	Number of employees.
Putilov Works.....	1801	12,440
Brjansku Works.....	1873	10,500
Ssormovo Works.....	1849	8,700
Alexandrow South Russian Works.....	1885	7,132
Kolomna Machine Works.....	1863	6,850
Baltic Shipyards.....	1855	5,900
South Dnjeprovsk Works.....	1888	5,889
Ishorsch Admiralty Works.....	1714	4,529
Russian Baltic Wagon Works.....	1869	4,300
Ostrovetz Iron Works.....	1837	4,000
Obuchov	1863	4,000
New mechanical shops, St. Petersburg.....	1864	4,000
Dvigatel Wagon Works in Revel.....	1898	4,000
Phoenix Wagon Works in Riga.....	1895	3,750
Russian Locomotive Works.....	1895	3,500
Hartman Machine Works.....	1896	3,000
Mariupol Works.....	1896	2,675
North Volga Wagon Works.....	1897	2,500
Moscow Iron Works.....	1885	2,350
Russian Belgian Works at Petrovsk.....	1895	2,200
Iron works, St. Petersburg.....	1857	2,000

The following figures will give an idea of the growth of the Putilov Works: In 1885-86, 43,062 tons of steel were produced; in 1900-1901, 86,246 tons.

FORESTS OF NORTHERN RUSSIA.

Export, the organ of the Central Union for Commercial Geography, etc., Berlin, Germany, in its issue of October 22, 1903, says:

The sawmill industry of the Province of Archangel is in a flourishing condition. This industry is confined mostly to the coast of the White Sea. In late years, however, work was begun in the forests in the Petschora region south of Nova Zembla. The first company here was a Swedish one—the Petschora Wood Stock Company. The logs were sawed up at mills in the Murman region near the Norwegian boundary, but the shipping was not profitable and the company dissolved. The rights and business of this company were assumed by the North Russian Company, having two sawmills—one at Oserko and the other at Bjeloscharsko on the Petschora. One hundred workmen, mostly Russians, are employed. The Swedish company has been greatly assisted by the Russian officials in connection with the international telegraphic communication system at Ust-Zylma on the Petschora, whither messages can be telegraphed from Sweden, whereas formerly this could only be done from Russian territory and in the Russian language. Ust-Zylma is 165 miles from Bjeloscharsko, but there is regular winter traffic between the two places, and in the summer there is steamboat service every nine days. It is the intention of the Russian officials to complete the telegraph line to Bjeloscharsko, and the Swedes hope finally to see the sawmill at Petschora brought into their system. However, it seems as if the necessary means would fail, although Russia, at the instance of a former Governor—Englehardt—has done considerable for the Arctic region by the

founding of Alexandrowsk, on the Murman coast, and by stationing a permanent hydrographic expedition there, which will aid not only the fishing industry of this section, but will help the prosperity of the coast in other ways.

The Russian officials are considering projects for dredging the mouth of the Petschora, in order to utilize the stream to better advantage.

In addition to the Swedish company mentioned there is the Stella Polare Company, financed mostly in Norway, with head office in Archangel. It has a large sawmill in Archangel and is also building one at the mouth of the Petschora, which will be ready to ship lumber with the first open water in 1904. The Stella Polare mill will turn out about 10,000 standards (1 standard=165 cubic feet) of planks and boards, which will go chiefly to England and the Continent. Time of shipment is limited to three months in the year. A French company is also in process of formation. The three companies have secured from the Russian Government the right to cut wood for fifteen years and in this time they are allowed to export about 600,000 standards, valued at about \$23,800,000.

In Archangel there are 18 sawmills, exporting more than 100,000 standards. All the machinery used is foreign made. In addition to the two newest companies in the Petschora region there are, in the remaining parts of the Province, 15 sawmills. The forests of Archangel cover 86,390,400 acres, which, with the exception of a few portions sold yearly by auction, belong to the Government. Of the 451 districts into which the Government is divided only 113 are cleared off, amounting to about 12,696,609 acres. One can not estimate the amount of wood that can be exported by means of rational treatment, but there is plenty of room for enterprise on the part of those interested.

MANGANESE INDUSTRY IN THE CAUCASUS DURING 1901.

(From United States Consul-General Watts, St. Petersburg, Russia.)

Government statistics relating to the manganese industry in the Caucasus during 1901 have just been published.

In regard to the production of manganese, the first place belongs to Russia, which yields more than half the world's product.

Layers of manganese exist in the Perm, Orenburg, Ekaterinoslav, and Kutais (Caucasus) Provinces. The latter are the richest, occupying an area of 54.7 square miles. The Sharopan district of this Province yields alone three-fourths of the total amount of manganese produced in Russia. The Sharopan manganese ore largely excels in quality the ore of other countries—*i. e.*, Chile, Spain, etc.—being richer in metal and freer from phosphorus.

Manganese produced from mines of the first three Provinces, which form the center of Russia's steel industry, is exclusively used for local wants. Nearly the whole of the production of the latter Province (Kutais) is exported.

The total yield of manganese in this Province in 1901 (375,211 metric tons) shows a decrease (286,733 tons) compared with the production of 1900.

It is of interest to mention that while richer mines showed a general decrease of production, a comparatively poor deposit, viz, of Darkvety, yielded a greater amount of ore, owing to the fact that the owners, a French company, are constantly improving the technical methods of working the ore.

This decrease of production has naturally reduced the number of workmen to 1,975 men, against 3,702 men in 1900.

The transport of the ore to the railway station costs from 1 to 2½ cents per pood (36 pounds), according to distance.

The amount of manganese exported in 1901 was 355,545 metric tons, against 461,125 tons in 1900.

The chief importers were: Great Britain and Holland, consuming 36 per cent and 29 per cent, respectively, of the total amount exported; next came the United States, with 14 per cent; Belgium, with 4.5 per cent; Germany, with 4 per cent; and France, with 2.5 per cent. Russia consumed only 8.5 per cent of its total yield.

The decrease of the export was due to economical as well as to political causes, viz, the overcrowding of foreign markets and the competition of foreign manganese, especially American; the concentration of the export in the hands of foreigners, who establish their own prices; and the South African war, which caused a decrease in the production of iron and steel, as well as a diversion of means of conveyance.

ETHELBERT WATTS, *Consul-General*.

ST. PETERSBURG, RUSSIA, *December 12, 1903.*

PUBLIC HEALTH AND SETTLEMENT OF SIBERIA.

(From United States Commercial Agent Greener, Vladivostock, Siberia.)

HOSPITALS AND PHYSICIANS.

Dr. Blonsky, chief medical inspector of these Provinces, has made a report relative to the transactions at the Habarofsk conference which contains a good deal of valuable information relative to this portion of the Russian Empire, from which I glean the following statistics:

The population of the Amur Province in 1901 (the latest general census), excluding Sakhalin, was 1,123,431. Of these scattered people, 170,000 live in cities. For their medical care the Government supplies 105 doctors, 215 assistant doctors, and 103 nurses. Of these, 56 doctors, 104 assistants, and 65 women nurses are in the few cities. Hence there are 49 doctors, 11 assistants, and 38 nurses for nearly a million people outside the cities. The chief inspector

recommends an immediate increase in the number of physicians and a limit of their circuit of work to a region of 66 miles in diameter.

There was a large amount of disease needing hospital treatment—notably at Ghizigha, Okhotsk, Anadir, and in the Commodore Islands.

In the cities and villages, in 1901, there were in the three Provinces 43 hospitals, with 633 beds; military department, additional, 20 hospitals, with 1,255 beds. Many of the hospitals are without any physician, because the physician, if there should happen to be one, must be away on his wide circuit.

It was recommended by the conference to increase the estimate for the support of each patient from \$128.75 to \$159.65.

UNDESIRABLE SETTLERS.

Previous to the construction of the Siberian Railroad the immigrants came mostly from the Poltava and Chernigoff Provinces. With the opening of the Siberian Railroad many other Provinces joined in supplying emigrants.

During the last twenty years the number of immigrants amounted to 2,000,000 persons. Out of this number 75 per cent arrived from the black-earth Provinces of Russia. Since 1902 the Government arranged that emigrants from Russia should first send out pioneers to survey and choose a place for the future settlement. This innovation was followed by the coming of settlers from 45 different Provinces.

With regard to the kind of settlers most desirable, the Habarofsk conference came to the following conclusion:

That sectarians (unorthodox) as a class make very good colonists, but they should be settled in communities by themselves, separated from the settlers of orthodox faith, to avoid and prevent quarrels and dissensions on religious subjects; that localities chosen by and for the sectarians should be left open for their settlement for five consecutive years, but after expiration of the time settlers of the orthodox faith might be settled in such localities if the land be not taken up by sectarians.

That sectarian newcomers should be offered settlement on lands already appropriated to their co-religionists in case they dislike to settle in orthodox communities; but that no new sectarian communities should be established.

With respect to discharged soldiers, the reports unanimously prove that they shun the obligation of becoming agriculturists. They enroll themselves in some community, but do not stay in the locality chosen but wander away, no one knows where. In some villages not over 10 per cent of the enrolled "reserve" soldiers are

to be found at home. Many communities have already applied to the authorities to cease forcing any more reserve soldiers on them. The only object the discharged soldiers have in view is the right to claim the subsidy allowed by the Government to those of them who have declared their intention of remaining in the Far East. The conference consequently recommended that any land allotment to a discharged soldier should be withdrawn if within three years he fails to settle down permanently as an agriculturist.

As to ex-convicts, the conference came to the same conclusion as in the case of discharged soldiers. They enroll themselves in the existing communities, but very few of them take to agriculture seriously. The majority of them are absentees. They prefer working in the mines, in the fishing industry, or in cutting firewood. And even those who remain in the villages are an undesirable class of settlers.

The discussion at the conference on the subject whether Jews are a desirable or undesirable class of settlers in these Provinces, which threatened to become acrimonious, was stopped short by the declaration of the chairman that this question was beyond the jurisdiction of the conference; for, by virtue of the law in force, Jews are neither allowed to come into nor to settle in Siberia or in the Amur Provinces. It should be said that this law is not enforced against Jews who are manufacturers or artisans.

RICHARD T. GREENER,
Commercial Agent.

VLADIVOSTOCK, SIBERIA, *October 5, 1903.*

FOREIGN COMMERCE OF SPAIN.

(From United States Consul Bartleman, Cadiz, Spain.)

The financial department of the Spanish Government has just issued a report on the foreign commerce of the country, from which the following figures for the nine months ended September, 1903, are taken:

Importations during September last are valued at 72,074,000 pesetas* (\$10,811,100), an increase of 4,019,000 pesetas (\$602,850) over the same period of the previous year. During the first nine months of the present year their value was 607,700,000 pesetas (\$91,155,000), an increase of 22,100,000 pesetas (\$3,315,000) over 1902.

The increase in value for raw materials was 7,000,000 pesetas (\$1,050,000); manufactured articles, 6,000,000 pesetas (\$900,000); alimentary articles, 8,000,000 pesetas (\$1,200,000).

* The peseta is reckoned at 15 cents.

Exportations during September were valued at 73,509,000 pesetas (\$11,026,350), an increase of 8,713,000 pesetas (\$1,306,950) over September of 1902, and during the first nine months of this year 580,034,000 pesetas (\$87,005,100), an increase in value of 34,688,000 pesetas (\$5,203,200) over the nine months of 1902.

Spain's commercial balance for the month of September was 1,500,000 pesetas (\$225,000) in her favor; but for the nine months there was a deficit of 27,700,000 pesetas (\$4,155,000), an improvement of 3,000,000 pesetas (\$450,000) over the same period of 1902.

The balance for wines shows but a slight increase, while oil (olive) has decreased 3,000,000 pesetas (\$450,000).

The value of the importations of wheat increased 8,000,000 pesetas (\$1,200,000).

R. M. BARTLEMAN, *Consul*.

CADIZ, SPAIN, *November 17, 1903.*

NORWEGIAN COD-LIVER OIL.

(From United States Consul Bordewich, Christiania, Norway.)

Pure cod-liver oil has for some time been a scarce article in the world's markets, owing largely to the many admixtures and adulterations used by unscrupulous and careless manufacturers.

The best Norwegian oil is extracted from the fat livers of the cod in the early part of the winter fisheries in the Lofoten Islands. The livers at this time, in January, February, and a part of March, are, as a rule, light colored, plump, and very rich in oil, which is extracted, after careful sorting of the livers, with simple machinery, by steam. The product is as clear as crystal, nearly tasteless, and without smell.

The islands present many advantages over other places for the production of strictly pure oil. The shoals of fish seek the shore for spawning purposes and the banks are so near land that the boats sometimes land two catches in one day; consequently, the livers are, except when stormy weather interferes, received fresh at the factories daily. The average annual catch of cod in the islands is 30,000,000. Unlike other districts in the country, the cod at this time of the year is about the only kind of fish caught, so there is less opportunity for mixing the livers from cod with those from inferior fish, such as coalfish or pollock, ling, haddock, tusk, and others. Oil from these contain less fat, the color of the oil is darker, and its medicinal properties are of less value. Oil from these and other inferior fish may be bleached by exposure to the sun in glass coverings and by various chemical processes.

Experiments have been made in this country for manufacturing cod-liver oil on board ships located among the fishing fleet in the open sea, but it has been found that the ship's motion had a detrimental effect on the oil thus produced. Establishments on shore, in places where unmixed cod livers can be obtained fresh every day, are found to be the best. The livers have to be carefully cleaned and only those of the right color selected for medicinal oil.

The year 1903 was an exceptional one as regards the Norwegian winter cod fisheries. In ordinary years the shoals of fish arrive in the beginning of January, but this year no fish whatever appeared before the middle or first part of March, and they were then found to be in such poor condition that only a very insignificant quantity of oil was produced—only 3,000 barrels against 30,000 barrels in ordinary years. The quality of the 1903 output was also, as a rule, poor. It is estimated that in ordinary years the livers of 4,500 cod are required to produce a barrel of 30 gallons, or 100 kilograms, of medicinal oil, while 40,000 livers were required the present year (1903) to produce the same quantity.

Prices for the best quality of medicinal oil f. o. b. Christiania have for the last three years been as follows: In 1901, 56 kroner (\$15) per barrel; 1902, 130 kroner (\$34.80) per barrel; 1903, 400 kroner (\$107.20), per barrel—all in wood-covered tin barrels of 30 gallons, price including barrel.

The most reliable manufacturers of the product in Norway complain of being unable to compete in prices with other manufacturers, who are said to be less scrupulous in the production of the goods. The medicinal oil bought from here ought to pass from the factory in Norway to the importer in America, bottled and in sealed packages, under guaranty that the oil was made only from Norwegian cod livers.

Cod-liver oil can be properly tested as to purity by chemical analysis only. Where large quantities of oil of inferior grade are added, it can be detected by experienced people without any scientific test simply by the difference in taste and color. If the admixture consists of an oil of fish nearly related to the genuine article, it will, of course, make the ascertainment of its presence more difficult than if oil of an altogether different kind is added. Coalfish oil is the nearest thing to pure cod-liver oil, and is therefore the one mostly used as an admixture. If chemicals are used, their presence is easily detected by a scientific test.

Considerable apprehension is felt that the conditions ruling the Lofoten fisheries in 1903 will also make themselves felt in 1904. According to recent newspaper reports the Greenland seal has again appeared in great numbers in the bays of Finmarken. Before 1903

these animals were never found in numbers near the Norwegian coasts, but that year they came in large shoals as early as January and the fishermen believe, contrary to the views of scientific people, that they were the cause of keeping the cod so long away from its customary spawning places.

It is generally believed that the Norwegian winter cod is the very same species of fish as appears and is caught on the banks of Newfoundland, but it is different from the common cod caught at all seasons of the year. The first small shoals of winter cod arrive the latter part of December on the banks along the coast as far south as Bergen; the larger shoals arrive later. The Lofoten fisheries terminate the latter part of April and the fish gradually work farther north and last appear in great numbers on the banks at Finmarken as late as June, after which time they disappear till next season.

One large British wholesale drug house has for years managed its own cod-liver-oil factory in the Lofoten Islands. The plant was established some ten years ago; it is managed by an Englishman, who stays up there only about three months every year during the fishing season.

HENRY BORDEWICH,
Consul-General.

CHRISTIANIA, NORWAY, *December 1, 1903.*

COMMERCIAL CONGRESS IN SCANDINAVIA.

Export, the organ of the Central Commercial and Geographical Union, published in Berlin, prints the following comment on the commercial congress recently held in Copenhagen:

A recent noteworthy event connected with Scandinavia's industries and trade was the commercial congress held in Copenhagen, and a remarkable action of that meeting was the movement or motion put through to organize a central body to help the business men of Norway, Sweden, and Denmark. Henceforth in all the larger questions in dispute arising between any of the Scandinavian countries and the outside world the outside party will have to fight a united Scandinavia rather than either one of the Kingdoms separately.

The shipping interests are sure to be the first to feel the effects of this organization. As a matter of fact the apple of discord discussed during the entire congress was the bill of lading and the difficulties due to it between merchants and shippers or forwarding agents. Hamburg sent the vice-president and secretary of its chamber of commerce to participate in the discussions.

The sea laws of the north have some very severe restrictions in regard to the responsibilities of forwarding agents relative to the transportation of goods, but they permit parties to circumvent these. It has grown to be the universal rule for forwarding agents to note in the bills of lading that they will not assume the responsibility of delivering goods at their destination in the same condition as they

were received on board. In some cases they will assume only partial responsibility. This was the cause of considerable trouble, not only to the makers of the bills of lading, but to parties buying them, since a bill of lading is a negotiable paper. The buyer of such paper is, at present, absolutely helpless, as far as the forwarding agents are concerned. He has to take the wares as they come, since he steps into the place of the original sender, the one who entered into the contract in which the forwarding agent objected over his signature to assuming any responsibility in regard to the condition in which the goods would be delivered. The Copenhagen Wholesale Merchants' Society urged the organization of all Scandinavia for the purpose of securing legal enactments like those of the United States, which relieve the shipowner from all losses that come to the goods to be transported through nautical mistakes, but which, on the other hand, hold the shipowner to a proper manipulation and care of the wares when loading and while on board; also for the seaworthiness of his ship. The chambers of commerce of North Germany took a similar stand. It looks as if Scandinavia has taken the lead in giving Europe a Harter act. There is no danger of Scandinavia being boycotted by the shipowners; its imports are too large. If excessive freight rates are asked for wares destined for Norway, Sweden, or Denmark, competing ships from other parts of the world will soon secure a reduction. In the Danish shipping world the principle of freedom of contract was always set up in opposition to this new attitude of the merchants.

The matter, when discussed in the recent commercial congress, met with very great favor. The vice-president of Hamburg's Chamber of Commerce said he was sure that Hamburg was ready and willing to help in the good work of getting such a system of sea laws enacted. Hamburg, he added, can do little or nothing just now, as the German Government had the matter under consideration. The vice-president called attention to the fact that some of Hamburg's biggest merchants had long taken stand in favor of just such regulations. Attention was called by the secretary of the Chamber of Commerce of Hamburg to the fact that English shipowners had already granted concessions similar to those Scandinavia is demanding. At present the merchant is heavily handicapped in his dealings with shippers. He must take the bills of lading as the latter deliver them. Freedom of contract is practically unknown. A representative of the shipping interests opposed the passage of a law, saying it took away from a man rights acquired by purchase or agreement. There is no difference, he claimed, between contracts between two merchants and one between a merchant and a forwarding agent. In the first case the merchant demands freedom of contract; why not in the other? Merchants must be prepared, after the passage of such a law, to pay considerable more for freight to all parts of the world. It was finally voted to seek assistance by law. For this purpose petitions are to be prepared and sent to all the Scandinavian governments.

BRITISH TRADING ASSOCIATIONS.

(From United States Consul Fleming, Edinburgh, Scotland.)

THE BEGINNING OF COOPERATION.

The first cooperative store of which there is any record was that established in 1794 by the Bishop of Durham, at Mongewell, in Oxfordshire, England, for the benefit of the poor of three or four small parishes. Goods were procured from the wholesale dealers and sold at a little more than first cost. The transactions of this store in the

year 1796 amounted to £223 14s. 2d. (\$1,088.41) and produced a saving of £48 1s. (\$233.63), or 21 per cent. It is said that the oldest productive cooperative institution was the Hull Anti-Mill and General Industrial Society, established in 1795, which existed until 1897. Two cooperative societies now existing date as far back as 1800—the Bridgeton Old Victualing and Baking Society, in Lanarkshire, Scotland, and the Pelican Provident Society, in Nottinghamshire, England. Ten societies at present in operation in England and nine in Scotland were instituted before the Victorian era. Many associations date back to 1830–1840. Robert Owen was a leading spirit in various cooperative enterprises, and probably to his experiments and influence was chiefly due the development of the cooperative idea into a system, of which the first marked exemplification was the Equitable Pioneer Society, established in Rochdale, Lancashire, in 1844. This association, organized by 28 workingmen with a combined capital of £28 (\$136.26), prospered from the start. The trade for the first year was £710 (\$3,445.16). At the close of 1902 this society had a membership of 12,239; share capital, £262,882 (\$1,279,315.25); investments, £209,382 (\$1,018,957.50); and the sales for the year amounted to £277,242 (\$1,349,198.19). Its constitution and rules were adopted by other societies that were formed gradually in various parts of the United Kingdom from 1846 onward, and this “Rochdale movement” became a notable trade factor as early as 1862.

GROWTH AND PRESENT POSITION OF THE SOCIETIES.

In the fifty-eight years from the institution of the Rochdale Society the cooperative movement has made remarkable progress. From the success of the distributive (retail) societies sprang the productive and wholesale societies and the Cooperative Union, the last-named feature of the system being a central advisory and administrative body maintained by contributions from the various associations. The number of cooperative societies in the United Kingdom (including the wholesale and productive) at the end of 1902 was 1,638, with a total membership of 2,022,208 and share capital of £25,904,113 (\$126,062,365.91). Sales in 1902 reached the great sum of £85,586,708 (\$416,507,714.48) and the profits £9,594,353 (\$46,690,918.87). The sales of the retail societies alone were £55,319,262 (\$269,211,188.52) and the profits £8,682,734 (\$42,254,525.01). The average dividend paid on members' purchases was about 15 per cent. Many of the distributive societies pay a much higher dividend to members on their purchases. For example, St. Cuthbert's Cooperative Association (Limited), of Edinburgh, seldom returns less than 20 per cent to members.

The following table shows the share capital, trade, and profits of all societies (retail, wholesale, and productive) making returns to the Cooperative Union for each year from 1882 to 1886, inclusive, and from 1897 to 1901, inclusive:

Year.	Share capital.		Trade.		Profit.	
1882.....	£7,289,359	\$35,473,665.57	£26,573,551	\$129,320,185.94	£2,106,958	\$10,253,511.11
1883.....	7,500,835	36,502,813.52	28,089,310	136,696,627.12	2,324,031	11,309,896.86
1884.....	8,205,073	39,929,987.75	29,295,227	142,565,222.20	2,658,646	12,938,300.76
1885.....	8,799,753	42,823,997.97	29,882,679	145,424,057.35	2,883,761	14,033,822.91
1886.....	9,297,506	45,246,312.95	31,253,757	152,096,408.44	2,966,343	14,435,708.21
1897.....	18,735,939	91,178,447.14	61,637,194	299,957,404.60	6,428,096	31,282,329.18
1898.....	19,856,945	96,633,822.84	65,270,640	317,639,569.56	6,834,689	33,261,014.01
1899.....	21,524,161	104,747,329.51	70,068,753	340,989,586.47	7,418,046	36,099,920.86
1900.....	23,255,837	113,174,530.76	77,529,915	377,299,331.35	8,059,350	39,220,826.78
1901.....	24,705,148	120,227,602.74	82,029,409	399,196,118.99	8,544,433	41,581,483.19

Below are statistics of the English Cooperative Wholesale Society for 1892 and 1902:

Item.	1892.		1902.	
Number of members.....	824,194	.....	1,392,399	.....
Belonging to shareholders:				
Shares	£523,512	\$2,547,671.15	£1,006,894	\$4,900,049.65
Loans and deposits.....	£925,471	4,503,804.62	£1,701,032	8,282,452.08
Reserve.....	£56,301	273,988.82	£342,152	1,665,082.71
Insurance.....	£218,534	1,063,495.71	£446,757	2,174,142.94
Total net sales.....	£9,300,904	45,262,849.32	£18,397,559	89,531,720.87

The following figures refer to the Scottish Cooperative Wholesale Society:

Item.	1892.		1902.	
Number of members.....	139,022	.....	288,729	.....
Belonging to shareholders:				
Shares	£129,973	\$632,513.60	£285,144	\$1,387,653.28
Loans and deposits.....	£574,374	2,795,191.07	£1,538,442	7,486,827.99
Reserve.....	£47,044	228,939.63	£154,482	751,786.65
Insurance.....	£27,103	131,896.75	£147,060	715,667.49
Total net sales.....	£3,104,768	15,109,353.47	£6,059,119	29,486,702.61

COOPERATIVE PRODUCTION.

The statistics given below, taken from the returns to the Cooperative Union, show the position of the productive societies:

Item.	1892.		1902.	
Number of societies.....	127	.....	139	.....
Number of members.....	22,491	.....	33,270	.....
Share capital.....	£767,955	\$3,737,253.01	£870,917	\$4,238,317.58
Sales.....	£2,519,624	12,261,750.20	£2,997,645	14,583,039.39

The following is the net value of supplies by the productive departments of the English Wholesale Society in the years named: In 1892, £780,886 (\$3,800,181.72); in 1902, £2,943,203 (\$14,323,097.40).

For the Scottish Wholesale Society the returns for the same period were as follows: In 1892, £251,893 (\$1,225,837.28); in 1902, £1,496,976 (\$7,285,033.70).

The returns sent in by 647 distributive societies as to the value of goods produced by them amount to £4,534,145 (\$22,065,416.64).

It thus appears that the total value of supplies produced by all cooperative societies in 1902 was £11,971,969 (\$58,261,587.14). The trades and industries engaged in by the productive societies include cotton, linen, silk, boots, shoes, hardware, cutlery, wood working, building, printing, milling, baking, cabinetmaking, farming, etc. In the cooperative congress at Doncaster, England, in June of this year there were strong expressions in favor of taking steps to stimulate production. Mr. S. R. Foster, chairman of the committee on production, said that if cooperators were only determined they could produce three times as much as they were doing now and sell the goods in their stores; they should not be content to produce only about £12,000,000 (\$58,398,000) of the £55,000,000 (\$267,657,500) sold by the retail societies. They employed at present, he said, 24,016 persons in the productive societies, but if they were to treble the trade, as he maintained they could, then they should be able to employ over 70,000. "The very outcome of the Cooperative Wholesale Society," he continued, "was the result of merchants refusing to sell to cooperators. I wish the same thing would happen to the distributive buyers; then it would force them more to cooperative production."

STRUGGLE AGAINST COOPERATIVE TRADING.

To deal with the benefits which may be derived by a vast number of people from the cooperative system of trading is aside from my purpose in this report. I am looking at the movement simply as a factor in the commercial and industrial situation, noting its advance and calling attention to the bitter antagonism that has been aroused in the business world.

Among the resolutions adopted by the Doncaster congress was one "to strengthen our movement to resist any attempt which may be made to retard its free development." It was further declared that "we believe that the influence which in many places has been exerted to prevent individuals from joining cooperative societies is an interference with personal liberty which ought to be resisted by every means in our power." One speaker, Mr. J. T. Harris, said that the great "combines" of the present day were "menacing to the interests of cooperators," whose vulnerable point was "the small

numbers employed in the movement." The combine that Mr. Harris and others who spoke on the same subject had specially in mind, no doubt, was the central board (corresponding to the Cooperative Union) which had been recently instituted by what are known as the traders' defense associations. These associations, their objects and methods, and the development of an organized anticooperative movement throughout the country are now matters of considerable interest and importance in the United Kingdom.

Some idea of the effect of cooperation upon private traders may be derived from the figures above given showing the profits which have been distributed among members of these societies. From the inception of the movement the opposition on the part of the trading community has been year after year slowly gathering strength. Since the federated societies became an outstanding feature of the commercial life of the country the hostility of the shopkeepers, jobbers, and commission agents has developed concerted action against cooperators. Of course shopkeepers, being the most numerous class and the most seriously affected by the growth of cooperative distributive societies, have felt the keenest resentment and made the sharpest attacks upon their "unfair" trading plan and "inferior goods;" but the commission agents and jobbers, many of whose former customers now deal directly with the wholesale societies, have not been slow to second the efforts of shopkeepers against the cooperative "invasion." The earliest action taken by private traders—not concerted action, strictly speaking—was to issue to every purchaser of goods who desired it a ticket showing the amount of each purchase, the tickets to be presented at the end of three or six months, when a certain per cent was repaid either in cash or in goods; and this practice, borrowed from the cooperators, still obtains, but not widely.

Shopkeepers also helped one another by sending their customers to shops in other branches of trade with cards entitling them to a discount from current cash prices. This plan has been followed extensively in some lines of business. (I may note that the trading stamp, which has been quite common in the United States for many years, was introduced here much later. This is a purely business project of the trading-stamp companies. To the consumer it means, briefly, an allowance of 5 per cent—in goods—by the trading-stamp company's store on the amount of his purchases at shops handling the company's stamps.) The first really aggressive step against cooperators was an effort to induce wholesale houses in important branches to refuse to sell goods to these institutions. It was partially successful, and this led to the establishment of the cooperative wholesale societies. The next move of the shopkeepers was to enter

into combinations for the purpose of buying goods in great quantities at low prices, which enabled them to at least meet the prices of cooperative stores without narrowing the margin of profit.

TRADERS' DEFENSE ASSOCIATIONS.

Out of the above-mentioned buying combinations, I am informed, grew the traders' defense associations, instituted some years ago. Statistics of these organizations are not obtainable. The plan of the originators of the movement was to divide the entire country into large districts and to form a society with board of management, secretary, and other officers, in each district. In 1900 the total membership of these societies in the United Kingdom was said to number between 7,000 and 10,000 shopkeepers and other traders. Their object, as the name implies, has been to promote the interests of members, especially as against the encroachments of cooperative societies, and this has been done chiefly by secret methods, or rather by methods pursued secretly. A boycott of cooperators has long been carried on in different places by a limited number of shopkeepers and commission agents. This was not begun by the traders' defense associations, nor is it known that a majority or many of these organizations have officially sanctioned the use of this weapon. One association in England last year adopted and made public a resolution practically indorsing the boycott.

Anyone who investigates the matter carefully is surprised at the bitterness of feeling which finds vent in an ugly kind of warfare on cooperators and even minor members of families dealing with cooperative stores. It is not probable that the men back of the traders' defense movement at the present time are in any way responsible for this phase of the struggle. They are men of character and high standing, as well as of great energy and business capacity. In saying that they are "back" of the movement, I mean that these controlling spirits are not in the public knowledge identified with it, although for two or three years they have been shaping and directing the main plan and effort intended to bring forth a huge combination of traders. My informants do not profess to be fully cognizant of the details of the scheme or of the arrangements thus far accomplished; but they have had an insight into the enterprise and know the purpose of the promoters. In the autumn of 1901 delegates from the traders' defense associations met in Manchester to consider the question of setting up a central board or council. The meetings were held behind closed doors. As a result of the discussions a committee was appointed to report upon the subject to the associations at a later date.

TRADING COMBINE AGAINST THE COOPERATIVE MOVEMENT.

Of what followed the Manchester conference, these facts are definitely known. A central board was constituted, with Mr. Robert Walker, 414 Corn Exchange Buildings, Manchester, as general secretary, to act for the traders' defense associations of the United Kingdom. This body became the nucleus of a syndicate having for its object the ultimate acquisition of the respective businesses of members of the associations and of other shopkeepers and manufacturers who might subsequently be drawn into the enterprise. A quiet canvass was entered upon to enlist as many as possible of the better class of private traders throughout the country. According to my informants, it is the desire and expectation of the promoters to bring together from 20,000 to 30,000 traders in all branches, buying the business of each, largely with shares in the syndicate or trust, and also to acquire a number of manufacturing plants in the same way, as well as various patent rights, etc. I know that they have been negotiating for the control of patented machines and other specialties, in some instances with success. The syndicate has no name as yet and is expected to remain nameless, to the public at least, until the complicated problem of construction and operation shall have been worked out.

It is believed that each business house going into the trust will continue nominally under the present ownership for an indefinite period.

The system of trading contemplated by the managers is roughly outlined as follows: Purchasing and producing goods of every description in enormous quantities, the syndicate will be able to deliver supplies to the shops of members as required at extremely low prices. In every community agents of the syndicate will work up trade by the house-to-house method practiced by several American food-producing companies, orders to be handed over to syndicate stores, the customers receiving a considerable discount on average prices in the form of tickets to be used at other syndicate stores for any kind of goods.

It seems doubtful if this project will be fully accomplished—*i. e.*, put upon as broad a basis as the managers wish to place it. The difficulties are great, not the least of which is the careful adjustment of details necessary to make the incorporation of various interests workable. Then the financing of the scheme has proved a hard task, a vast amount of capital being required. The promoters have had to proceed slowly, and they are now further embarrassed by the commercial depression and fiscal agitation. But there appears to be no room for doubt that a combination will eventually be effected on the lines indicated, which will become a formidable factor in the

mercantile world. Of course, it can not be regarded as merely a demonstration against the cooperative movement; it is a tremendous business enterprise, designed to advantage permanently the managers and all those connected with it, but its inspiration was and is the hostility on the part of private traders toward the cooperative societies. These societies are too prosperous and powerful to be easily weakened by any trading combination, no matter how colossal. Whatever else may result from this competition between huge concerns, consumers who are now compelled to pay high prices for most food products will probably derive substantial benefits, and from the same cause private traders outside of the trust will find fresh troubles confronting them.

RUFUS FLEMING, *Consul*.

EDINBURGH, SCOTLAND, *December 10, 1903.*

BRADFORD YARN AND PIECE-GOODS TRADE.

(From United States Consul Day, Bradford, England.)

YARNS.

It is only natural to expect that with dearer raw materials prices for yarns should be advanced, and this has taken place. Spinners of merino yarns have had a most difficult task to keep their frames going; in fact, there has been a fairly large portion of botany frames standing idle throughout the year, and to-day things are far from being healthy. The great struggle continues to be in regard to the price of merino-made fabrics, and until more universal support is given to these wools the present difficulty is likely to continue. Even in face of greatly reduced imports of Australian merino wool, prices in this department have advanced but fractionally, the greatly reduced consumption being a complete offset against the short supply. On the other hand, spinners of crossbred yarns have been and are extremely busy.

PIECE-GOODS TRADE.

This has been the rainiest season ever known in connection with the Bradford trade, and nothing is so serious to the manufacturers of this district as a sunless summer. Great preparations had been made by the production of some splendid fabrics of a "flake" and "spot" order, fashions for dress goods running very extensively on these goods. But the weather has been so wretched that the dry-goods stores find large stocks of unsold goods still

filling their shelves, and naturally they face the coming season in none too great heart.

Dry-goods houses in this city have found in the shipping trade considerable assistance, in fact, if the woolen and worsted export trade had not been better than it usually is, manufacturers here would have been very badly off for work. Even to-day there are a great many looms standing idle, many people out of work, and the prospects for winter are not very bright. Fashions this last season have not been running on what may be called essentially Bradford manufactures, for "colored" fancy worsted dress fabrics have not been really fashionable. As far as one can see these flake effects will not be worn so extensively the next season; but it is as yet too early to define what will be the most popular cloths. I give this statement for all it is worth; but in talking the other day with one of the leading officials in a large Bradford dry-goods house he said that there was a feeling among wholesale houses for something quite different next season, and that fabrics of the "crépon" order, which were so popular some five or six years ago, bid fair to come to the front once more. It is very noteworthy that during the past fortnight there has been a move in mohair, an article which has been greatly neglected during the past two years. Crépons always look stylish and had a long run, mohair entering largely into their manufacture. It is significant that mohair always languishes when there is no support coming from the dress trade, and the feeling is now general that there is a move somewhere owing to the big weight of mohair which has been lifted in so short a time. Then, too, alpaca has been forced up to a high price almost entirely through American patronage until its use in linings, which are largely shipped from this center to the United States, has almost become prohibited.

Manufacturers here are now substituting mohair for alpaca as much as possible, and this is not without some effect on the raw material. Linings still bulk largely in the piece exports from Bradford to the United States, and I think their manufacture is so simple that our mills could produce them fully equal in style, character, and cheapness to the Bradford-made article.

Worsted coatings, which at one time totaled very heavily in the exports to the United States from this center, continue to be shipped on a very small scale, though the shipments last month were the largest for the present year. No one looks for any increase in the immediate future.

EXPORTS TO THE UNITED STATES.

The exports of wool and woolens from Bradford to the United States during the years ended June 30, 1902 and 1903, were as follows:

Article.	1902.	1903.	Increase.	Decrease.
Stuff goods:				
Dress goods.....	\$1,350,996.38	\$2,142,968.92	\$791,972.54	.....
Linings.....	1,484,538.62	1,646,284.72	161,746.10	.....
Tapestry, damasks, etc.....	840.50	2,462.74	1,622.24	.....
Tops.....	225.56	46.37	.....	\$179.19
Wool.....	1,343,323.66	1,855,630.70	512,307.04	.....
Woolen cloths.....	46,121.18	41,796.80	.....	4,324.38
Worsted coatings.....	345,566.47	275,742.53	.....	69,823.94
Worsted and mohair yarns.....	68,875.11	44,303.63	.....	24,571.48
Total	4,640,486.48	6,009,236.41	1,467,648.92	98,898.99
Net increase.....	.....	.....	1,368,749.93	.....

ERASTUS S. DAY, *Consul.*

BRADFORD, ENGLAND, *October 29, 1903.*

WOOL INDUSTRY OF BRADFORD.

(From United States Consul Day, Bradford, England.)

As I have said on former occasions, the wool industry of Bradford is its very breath and life. This center can lay claim to being the largest consumer of wool in the world. The prosperity or adversity of the wool trade in general is of great concern to this district, and during the past year a strong line of demarkation has existed in this one branch of the industry. After many years of great quietude in crossbreds, this part of the industry has taken on a new lease of life, a great transformation having been effected.

Since I last reviewed the course of wool markets in this center 40's crossbred tops have risen from 14½ cents to 26 cents, while consumption must be nearly tenfold what it was twelve months ago. This is, and has been for the past twelve months, by far the most satisfactory aspect of the Bradford wool trade; in fact, had it not been for the marked improvement in this one department trade would have been extremely quiet. Merinos are to-day practically as quiet as were crossbreds in 1900 and 1901, the lowest point being touched for 40's tops in December of that year, when they made only 14 cents per pound. Fine wools have undoubtedly been at a discount on account of their dearness, and what at one time seemed likely

would result in merino values going much higher has resulted in a decided check and the long-despised crossbred being boomed. The transformation during the past year has been thorough and radical, while to-day crossbreds occupy the principal position on the market. It may be interesting to furnish a few particulars showing how far the market has traveled since the bottom was touched for crossbred wools:

New Zealand crossbreds.

Quality.	Increase per pound.	
	Cents.	Per cent.
Half-bred, super, 50's-56's.....	8½	45
Crossbred:		
Medium, 46's.....	11	126
Coarse, 40's.....	8½	87
Coarse, 36's.....	9	103

Such a record as the above stands unparalleled in the history of the wool trade of this country, and the immediate outlook seems to point to present conditions continuing for some time to come. Fashions have also come to the rescue and are largely running on "chevioty-made" fabrics, all of which means a heavy consumption in crossbred wools. European influence in this respect has not been without some effect on American manufacturers, who have sought for more wools of a coarse character among Bradford wool staplers, and it is noteworthy that during the past year there has been a continued increasing trade done in English-grown wools. The exports from this consular district in wool for September, 1903, were a "record" for the past year, and it is significant that the trade was developed considerably in the twelve months of what may be called essentially British-grown wools. It is noteworthy that in Scotch black-faced descriptions, which are known as carpet wools, some large quantities have been taken, along with almost every other description, with, perhaps, Lincoln luster wools as an exception. This shows conclusively that our manufacturers have not been slow to adopt European fashions, and with merinos being at such a high figure they have shown wisdom in so doing. The general feeling seems to be that crossbred wools have now all about reached the top and that it will be policy to go slow in the immediate future. With some, prices are not considered as yet to be extravagantly high, compared with some years, but crossbreds have now for so long been at such a low level that an advance of practically 100 per cent suggests a little caution in the immediate future. For the next season it seems likely that crossbred fabrics will still predominate, and this will mean a continuance of consumption as well as high rates.

The following list shows the course of prices for leading standard articles during the year:

Description.	October 1, 1902.	October 1, 1903.
Australian tops:	Cents.	Cents.
70's.....	50	52
64's.....	48	50
60's.....	46	48
50's.....	27½	33
46's.....	19½	28
40's.....	15½	26
36's.....	14½	24
Lincoln hogs.....	14½	15½
Lincoln wethers.....	9½	15
Irish hogs.....	13	17½
Irish wethers.....	11	17
Picked Shropshire hogs.....	15	20
Picked Shropshire wethers.....	14	19
Half-bred hogs.....	13½	18
Half-bred wethers.....	11	17
Deep-grown hogs.....	11	15
Deep-grown wethers.....	10½	14
Black faced.....	8½	12
Mohair:		
Turkey average.....	31	28
Cape firsts.....	26½	26

ERASTUS S. DAY, *Consul.*

BRADFORD, ENGLAND, *November 20, 1903.*

NOTTINGHAM LACE AND HOSIERY TRADE.

(From United States Consul Mahin, Nottingham, England.)

The lace trade has been under a cloud during most of the past summer and the present autumn, but there are now signs of clearing. The sales are large, with increasing exports, and the prospect for the coming year is good. This is not, however, wholly in favor of the local factories. Lace has for some years been imported from France, Germany, and Switzerland, sold in the home market, and exported to America and the British colonies along with the local product. This factor is now assuming large proportions. Indeed, one wholesale firm says its sales of foreign laces are greater than of the home product, and this experience is probably not singular. The imported laces are generally finer and more expensive than the domestic.

The long-depressed silk branch just now shows signs of a revival; also mercerized cotton fabrics. Torchon goods and insertions, galloons, and the like are in active request. Spotted nets in a variety of colors are popular for veilings and millinery trimmings. The

continued export of lace-curtain machinery is producing a grave effect upon that branch of the trade.

The most serious concern just now is felt in regard to the increased tariff duties of Russia, Austria, and Germany. This applies to both the lace and the hosiery trade. A meeting of the local chamber of commerce has just adopted the following resolution:

Resolved, (1) That the report of the proposed increases in the new German, Austrian, and Russian tariffs, as submitted to the council of this chamber of commerce; be sent to the Board of Trade and to the Foreign Office; (2) that the attention of His Majesty's Government be directed to the grave injury already done in the past to the staple trades of this city and district by prohibitive duties from the above and other countries; (3) that if the proposed new duties are put into force, the trade of this city and district will be still more gravely affected; (4) and that in order to avoid further injury by hostile tariffs this chamber is of opinion that His Majesty's Government should take steps to regain their power of negotiating, and meet foreign governments, if necessary, with the same arms with which they are injuring our trade.

In hosiery the demand for wool and mixed goods shows some improvement with the approach of cold weather, but the cotton branch is badly off." The depression is sadly felt in the homes of seamers and stitchers, to whom work is distributed.

FRANK W. MAHIN, *Consul*.

NOTTINGHAM, ENGLAND, *November 12, 1903*.

MEXICAN INSPECTION OF FOOD AND OTHER PRODUCTS.

(From United States Consul Canada, Veracruz, Mexico.)

The Mexican Government has authorized Lic. Arturo Paz to organize a company for the purpose of establishing and operating an institute to be known as the "Control Quimico Internacional," to which manufacturers and other persons may submit food and medicinal and other products for analytical examination.

The institute will issue guaranty stamps, which may be affixed to all products, samples of which have previously been analyzed, and will serve to assure the public that such products are pure and unadulterated and as represented to be by the manufacturer. The results of all analytical examinations are to be published in the official organ of the institute.

This certification in no case implies that the Government guarantees the quality of any article, nor does it exempt dealers and manufacturers from having to submit samples of their goods for examination to the board of health, its agents, or to any other

competent authority, if it shall be deemed expedient to make such examination.

Even after a certificate has been issued, the institute retains the right to reexamine such products at any time, and if it should be found that they are not as originally submitted the certificate may be withdrawn and reasons for such withdrawal published in the official paper of the company. In no case shall the institute issue certificates unless analysis has been previously made.

A legal department will be added, to which judicial power of attorney may be given by anyone desirous of prosecuting dealers or manufacturers for selling fraudulent or adulterated articles.

The company's business will be under the control of the board of health. An inspector, at \$200 monthly—to be paid by the institute—will be appointed by the Government. The company agrees to report to the board of health any case of dangerous adulteration that may come to its notice, and all analytical examinations shall be free to the Government.

This privilege is to be in force for the term of ten years; rules and regulations to be prescribed by the Government.

WILLIAM W. CANADA, *Consul*.

VERACRUZ, MEXICO, *November 20, 1903*.

ENGLAND'S TRADE IN COLONIAL AND FOREIGN BUTTERS.

The London Times of late date discusses the butter supply of Great Britain, and goes into the matter quite extensively.

Below are the British imports of butter for the years from 1894 to 1903, giving the totals from the colonies and from other sources:

Year ended June 30—	Colonial.	Foreign.	Total.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1894.....	15,520	107,534	123,054
1895.....	17,807	116,730	134,537
1896.....	12,949	133,249	146,198
1897.....	18,111	138,800	156,911
1898.....	17,732	141,426	159,158
1899.....	22,443	142,193	164,636
1900.....	37,534	133,957	171,491
1901.....	32,000	143,459	175,459
1902.....	27,235	160,672	187,907
1903.....	23,866	176,320	200,176

With the Australian and New Zealand butters coming in the winter season in Great Britain, the prices have been very much equalized during the season, rather than having them at a very low

ebb during the flush seasons in the northern hemispheres and at a very high range during the short season of production during the winter. The Times discussed this particular point and concluded that this is one of the reasons why there has been so great an increase in the consumption of butter per capita in Great Britain. The Times said:

As regards quality, there is much leeway to be made up before Canadian butter can be placed upon British markets as perfect as it should be. Large quantities of the Canadian article when first made are probably not inferior to Australian and New Zealand butter, but as very little of it makes as good prices on our markets it would seem that deterioration takes place between manufacture and consumption.

The one great difference between the manufacture of Australian and Canadian butter is this: In Canada butter is made for rapid consumption and therefore not enough regard is paid to its keeping qualities, while in Australia and New Zealand special care and attention are given to the keeping qualities of all butters for export. In Canada the government authorities appear adverse to the use of boron compounds, which, if used in proper quantities, are perfectly innocuous to the health, if not even beneficial. Their use has now been legalized in the United Kingdom and they possess marvelous powers of preserving butter from undergoing any deteriorating change for many months. Another improvement would be for Canadian manufacturers to make the butter drier, as dryness undoubtedly tends to improve its keeping qualities. The Canadian butter box is not quite strong enough and should be made of thicker wood. The lining of each box with tasteless and odorless paraffin wax is not possessed by the Australian and New Zealand boxes. But much of the parchment paper used in Canada is not genuine and the imitation stuff should be discarded.

The hints as to making, preserving, packing, etc., ought to teach American butter makers how best to succeed, not only in the markets of England, but in all parts of the world to which the United States is sending butter. When it is pointed out, as consuls are constantly doing, that Denmark is adding millions to her annual exports of butter by scientific manipulation the value of lessons like the foregoing becomes apparent. Under cooperation and scientific handling Denmark increased its butter exports from \$5,000,000 in 1882 to \$29,000,000 in 1900.

INDUSTRIAL DEVELOPMENT IN SCOTLAND.

(From United States Consul Fleming, Edinburgh, Scotland.)

Tendencies now plainly observable indicate that manufacturers are awaking to the new state of things in the industrial and commercial world. For instance, not a few of them are enlisted in the movement for improving and broadening the scope of technical education in Scotland as a necessary step toward bringing the youth of to-day up to a higher standard of skilled workmanship than that attained by the present foremen and operatives. This shows that

the masters are finally recognizing one of the serious deficiencies of the day, at least in some branches of production. It is also to be noticed that the "one-break" system has been gradually extending, doing away with the 9 o'clock breakfast and the attendant stoppage of machinery and loss of time. The bonus system also gains favor more and more, giving a fair reward to workmen for zeal and cleverness. The improvement of mechanical facilities goes on steadily, but so quietly that it attracts little attention.

There are in this part of Scotland constructional engineering firms and other iron and steel concerns whose plants have undergone radical changes in equipment and organization, and one or two such plants are probably not excelled anywhere for economical efficiency. Ropery and sailcloth companies on the east and west coasts have been adding to the number of their fiber machines of improved American pattern. To increase the output of blast furnaces new appliances are being introduced, dispensing with "pig-bed work" or casting in the sand; also new facilities for the filling of ore and coke from the bunkers to the barrows. Managers of iron foundries are adopting the hammer core machine and better equipment of tackle and portable jib cranes to facilitate operations. In some foundries there is also a further specialization, which makes for economy and finer work. Firms in the engineering trades are using a greater number of automatic machines—easily managed—one man taking charge of several machines. Boiler makers and structural-iron works are beginning to recognize the advantages of standardization.

Scotch shipbuilders have little to learn from other countries, but, not to be behind in any respect, they are making a wider use of pneumatic machinery in some departments. American machines are entering more largely into the boot and shoe industry. Paper makers are taking up new devices for regulating the speed of machines and for other purposes. In woolen mills old-style machinery has been for a year or two giving place to improved, faster looms, requiring fewer weavers to manage them, thus reducing the labor cost of production. In locomotive works, I am informed, special appliances have been adopted for work heretofore done by hand, and machines for cutting iron, brass, etc., quickly into all sizes and shapes.

RUFUS FLEMING, *Consul*.

EDINBURGH, SCOTLAND, *November 20, 1903.*

GRAIN, PROVISION, AND FRUIT TRADE OF SCOTLAND.

(From United States Consul Fleming, Edinburgh, Scotland.)

GRAIN AND FLOUR.

The following statement shows the quantity of grain and flour imported at the ports of Leith and Granton from January 1 to October 15, 1903, and for the corresponding period of last year:

Description.	1903.	1902.
Wheat.....bushels...	4,804,080	4,717,720
Barley.....do.....	3,331,720	2,893,680
Corn.....do.....	1,709,280	2,025,800
Oats.....do.....	1,095,300	729,250
Rye.....do.....	461,235	371,130
Flour.....sacks...	553,892	423,059

Statistics of imports from each grain and flour producing country for this period are not available, but it is estimated that four-fifths of the flour, two-thirds of the wheat, and one-half of the corn came from the United States. Roumania furnished a great quantity of corn in 1901-2 and early in the present year. The normal proportion of the imports of this grain into East Scotland from the United States is two-thirds, when the American crop and prices are at the average. The reduced total of corn imports this year is due mainly to a diminished demand from distilleries. A considerable increase of both wheat and flour compensates for the decline in corn. Large shipments of wheat from Galveston to Leith is a recent development in the grain trade.

I am told that Canadian millers are making a strong bid for the flour trade. Much British capital has been invested in flour mills in Canada, with the special object of supplying the British markets, and dealers here say that when these enterprises shall have been placed on a broad and firm basis—assuming that they can be so placed, against the competition in the United States—not by any possible efforts can American millers hold their trade in these islands. That is the local opinion now, which events may change; it takes no account of the constant improvement of milling processes and the growth of milling interests in the United States.

PROVISIONS.

Cheese.—The imported cheese is mostly Canadian. Apparently the United States produces little more than enough to supply the home market.

Butter.—The American butter trade has practically ceased, as it seems there is no surplus to offer; neither are Canadian shipments large. A notable commercial development of the past year or two has been the Russian “invasion” of the butter market, seriously disturbing the Danish trade. The best Siberian butter is fully equal to the Danish article, and prices of the former average somewhat lower than quotations of the latter in East Scotland. Much of the Canadian and Siberian butter is sold by retailers as Danish.

Canned goods.—The consumption of American canned goods has been constantly increasing; in some lines at the present time the supply does not equal the demand. Dealers express unstinted admiration for the methods of American firms in pushing their trade. Placing their goods with a prominent wholesale dealer in a city or town as agent, these firms send out their own men to work up business, all orders being turned over to the local wholesale house. To show how minutely this thorough-going system is carried out, it need only be said that in some cases the salesmen will call on the customers of a retailer to induce them to ask for these goods. The result of such alert and persistent ways of doing things is marked activity in this class of food products.

Fruit.—The failure of the fruit crop in Great Britain has caused a great demand upon the United States and Canada for apples. Prices rule high, the importers’ quotations to the trade ranging from \$4.85 to \$7.25 per barrel for the best grades and from \$3 to \$4.50 for ordinary grades. It must be said that Canadian exporters are year by year gaining a stronger position in the Scotch market. About half of the apples imported now are from the Dominion. The system of inspection at Canadian ports and at British ports, whereby the quality of the fruit is in a measure guaranteed, has proved useful to the shipper as well as to the buyer.

RUFUS FLEMING, *Consul*.

EDINBURGH, SCOTLAND, *November 20, 1903.*

BRITISH CRITERION OF PROSPERITY.

(*From United States Consul Fleming, Edinburgh, Scotland.*)

Except in so far as facts and statistics speak for themselves, it is no easy matter to correctly represent actual conditions. One can not be too careful in estimating the value of opinions expressed by newspapers, trade journals, and managers of manufacturing plants. I do not mean that they are intentionally misleading or that there is any other purpose on the part of the press or managers of great works than to say exactly what they think. But the mental habit of measuring conditions in this new century by those of the old days,

when British manufacturers had little competition to meet anywhere and profits were enormous, has imparted a pessimistic color to all comment on industry and commerce. The monopoly they long enjoyed at home and in many outside markets having come to an end, the requirement of vaster production at much lower prices to make industries pay renders vivid the memory of the easy-going times of prosperity and gives a distorted view of the existing situation. In fact, the chief apparent danger to British manufacturers in important branches lies in their reluctance to turn away from the past and forget all about it and to face the present and future—face the necessity for bringing their equipment up to date. They have lost ground and probably will continue to lose ground, for their rivals in the industrial field are formidable; but if they adopt advanced scientific methods in all departments they should be able to hold their own. None will admit this more frankly than the American captains of industry. One of these gentlemen, the head of a manufacturing concern in the Middle West, who has been in this country two or three months, said to me recently:

The discouraging talk I hear everywhere from manufacturers is inconsistent with Board of Trade returns. They are not living on their capital by any means. The wealth they have accumulated is untouched, save what may have gone into mining speculations and other things of that kind.

Speaking of Scotland only, I am convinced that the decline in certain branches of industry has not gone far enough to affect very materially the well-being of the people. The dullness in mercantile lines is partly due to the fact that skilled workmen are not fully employed, but the wiser heads in business are disposed to attribute restricted buying chiefly to the great losses sustained by speculative thousands—in Scotland they are numbered almost by tens of thousands—through the margin-wasting depression of South African and other shares. These losses have temporarily reduced the purchasing power of a class whose trade is, as a rule, the mainstay of mercantile houses.

RUFUS FLEMING, *Consul*.

EDINBURGH, SCOTLAND, *November 21, 1903.*

UNDELIVERED MAIL IN THE UNITED KINGDOM.*

(*From United States Consul-General Evans, London, England.*)

The number of undelivered letters (calendar year 1902) that could not be returned to the owners was more than 20 per cent over the figures for the previous year, due partly to the destruction of a

* Extract from the report of Consul-General Evans, which will appear in full in *Commercial Relations* for 1903.

large number of letters containing lottery circulars. Lottery circulars found in the post in open covers are always stopped and destroyed. The Postmaster-General in his report says:

I am impressed with the immense amount of unnecessary labor which might be saved to the post-office if the public would exercise more care in addressing correspondence. Most of the 2,500,000 letters, etc., could not be delivered because the addresses written by the senders on the covers were either incorrect, or insufficient, or because no address at all was given.

This carelessness is not confined to communications of an unimportant character. During the year 324,403 registered letters and letters containing property were sent to the returned-letter offices as undeliverable. They were found to contain £18,862 (\$94,310) in coin and bank notes and £714,200 (\$3,571,000) in bills, checks, money and postal orders, and stamps.

No fewer than 367,519 postal packets were found without any address at all. The contents included £186 (\$930) in coin and bank notes and £16,195 (\$80,975) in other forms of money. Owing chiefly to the use of flimsy envelopes and insecurely fastened labels, £1,184 (\$5,920) in coin and £24,000 (\$120,000) in checks, postal orders, etc, and 93,232 other articles were found loose in the post.

The number of postal orders issued during the year was 93,268,000, representing £32,900,000 (\$164,500,000). The produce of the commission on these orders was £392,475 (\$1,962,375). The orders increased 2.4 per cent in number and decreased 0.2 per cent in amount.

The total number of money orders of all kinds issued during the year amounted to 14,531,424, compared with 13,963,410 in the previous year, representing £45,402,495 (\$227,012,475), compared with £42,169,201 (\$210,846,005) the year before.

H. CLAY EVANS,
Consul-General.

LONDON, ENGLAND, *October 23, 1903.*

BERMUDA.

(From United States Consul Greene, Hamilton, Bermuda.)

AREA AND POPULATION.

The area of the colony of Bermuda is about 18 square miles, of which about 3,000 acres are under cultivation. Its length is 26 miles; its width (in the widest part), 3½ miles; its shape, that of a fishhook. There are two ports, St. George, at the eastern end of the land, and Hamilton, in the center, inside the Great Sound.

The permanent population is about 17,500; to this may be added the strength of the garrison, laborers on public works, the naval and dockyard contingent, and officials and their families, estimated at, say, 5,000.

The North Atlantic squadron (British), which remains in these waters but a part of the year, may have on board from 1,500 to double that number, depending on the fleet of ships that may come into the ports.

The tourist element is to be counted on as adding, according to the records in the steamer company's offices, some 2,500 more that visit these islands in a twelvemonth.

IMPORTS.

The local dealer therefore has as a basis on which to make his estimates for the season's business a local and transient population of about 27,000 people.

For these reasons the imports of Bermuda are comparatively very large, those for the calendar year 1902 amounting to \$2,658,418, of which the imports from the United States amounted to \$1,583,714; from the United Kingdom, \$746,906; and from Canada, \$246,511.

The nearness of New York insures prompt delivery of goods and enables dealers to frequently visit the northern markets.

Commercial travelers know the trade and are prompt in availing themselves of opportunities for placing orders.

The Dominion of Canada also comes in for a share of this trade, via the Halifax and St. John lines of steamers.

The United Kingdom and the continent of Europe supply principally the finer woolen and silk and fancy dress goods.

PRODUCTS AND EXPORTS.

Bermuda holds a unique place in the Western World. It is a little country, with absolutely no manufactures or railways, with agriculture alone as its industry (the annual export of potatoes, onions, bulbs, and vegetables being about \$500,000), with no business but that of selling goods at retail and in a limited way the warehousing of wines and spirits; nevertheless Bermuda is of importance in the Western Hemisphere.

BERMUDAN DEFENSES.

It is the western outpost of the British Empire, considered impregnable, well defended by fortifications, but more completely by its chain of reefs that can only be passed through in daylight, needing then a skilled pilot to guide all vessels into port.

On the land the Imperial Government is carrying on large and important works. At the naval station and dockyard the appropriation of £500,000 (\$2,433,250) was made, to be expended in five years. Other large appropriations have been made, and for very heavy amounts, for fortifications, barracks, officers' quarters, and other public works, all of which work is now started and some is well under way. The weekly pay rolls for this work is largely spent in the towns and means business activity and prosperity to all classes of the population.

BERMUDA AS A HEALTH RESORT.

Bermuda is also a favorite winter resort for a large number of strangers who come hither to escape the rigor of a northern climate, and who spend their money freely in every conceivable way. Of late years a crowd of visitors come in the summer months, eager to enjoy all the delights that Bermuda offers so bountifully. All this brings trade to the stores, life and activity everywhere—to hotels, boarding and lodging houses, and to the farmer and the artisan—and added to the great outlay of money made by the National Government may explain why it is that Bermuda can afford to import so heavily, pay its bills, and continue to prosper.

EGGS AND POULTRY.

The imports of eggs and poultry seem to be inexplicable, considering the ease with which poultry can be raised here. In 1902 there was imported in eggs alone some \$8,000 worth and poultry in proportion, and this was done even with a duty on eggs, recently imposed, of 6 cents per dozen. The price of this commodity never goes below 30 cents per dozen and that for a short time only, soon rising to 50 or 60 cents per dozen. It would seem that here is an opportunity for some skilled and enterprising man to establish a paying business.

I am continually receiving letters asking for information as to business conditions in this market and will be glad to give details as to a poultry farm to anyone who may desire it.

W. MAXWELL GREENE, *Consul*.

HAMILTON, BERMUDA, *November 27, 1903.*

NEW MONETARY LAW OF COLOMBIA.

(*From United States Minister Beaupré, Bogotá, Colombia.*)

One of the most important measures presented for the consideration of the present extraordinary session of the Colombia Congress passed during the last week and has been signed by the President. It is with regard to the free stipulation in currency (*libre estipulación*), under the title "For the regulation of the monetary system and the redemption of the paper money."

This law has been published in the *Diario Oficial*, and I forward herewith a complete copy and translation. Its principal features are as follows:

The monetary unit of the country is to be the gold dollar of 1.672 milligrams of weight and 0.900 fine, to wit, the gold dollar of the United States of America.

The gold coinage of other nations may circulate freely as well as silver coins 0.835 and 0.900 fine.

Future emission of paper money, whether by central or departmental governments, is absolutely prohibited.

The paper money heretofore legally emitted by the national and departmental governments is to preserve its character of a forced currency and its liberatory power in those places where it now circulates, according to the following rules:

(a) In public or private transactions contracts may be made at the will of the parties, either in the gold unit or paper money.

(b) When payment has been contracted for in gold the obligation can be carried out by the payment of an equivalent sum of paper money at the rate of exchange ruling on the day of payment.

(c) In the Departments and Provinces where silver has hitherto been current, that coinage shall keep to the gold unit, according to the price of silver in the market, and contracts may be made in that currency.

(d) Obligations contracted, or which may be contracted, with foreign houses or interests shall be carried out in accordance with the terms of article 203 of the commercial code.

(e) Obligations contracted in legal tender (*moneda corriente*), in which a particular coinage is not expressed, will be understood as contracted for and payable in the forced paper currency.

A council is to be created, known as the national amortization, to be composed of five members, two nominated by the Senate, two by the Chamber of Representatives, and one by the executive power. They are to be chosen from the most distinguished members of commerce, known for their rectitude and competency.

(a) The gold which the council selects to be sold in lots of \$1,000 at public auction for paper money.

(b) The paper money which the council shall collect by the above-mentioned sales and by contribution to be publicly burned.

(c) The council shall have the full management of the funds confided to it and of its own constitution.

(d) The council to fix, day by day, the rate of exchange, based upon the actual transactions in the open market, and that rate will hold good in all judicial matters. The council to appoint sectional councils in the country for the changing of deteriorated bills, buying up paper money, and burning the same.

The following sources of income to be at the disposal of the council for the amortization of the paper money: The rent from the emerald mines of Muzo and Cosquez; from the mines of Santa Ana, La Manta, Supia, and Marmato; from the pearl fisheries of the Republic; from the prudence of the exploitations of the national forests; harbor and light-house dues, tonnage, etc. The product coming from the export duties to include those on vegetable ivory, which, it is proposed, shall be made the same as those levied by the Republic of Ecuador. The council authorized to rent the Muzo and Cosquez mines for the period of ten years. Estimates of income and expenditure to be fixed in the gold unit heretofore mentioned (the United States dollar).

(a) Customs duties to be levied in gold, or in bills at the exchange of the day.

(b) The rents of national property, such as the mines of Muzo, etc., to be levied exclusively in gold.

(c) Rents not mentioned above to be fixed in gold, but levied in paper in periods of three months.

(d) For the fixing of exchange, in the periods of three months, the figure of the national council of amortization will be taken, but for the first three months liquidations will be made at 10,000.

The personnel of the national council to be reappointed every four years, but the members appointed this year to hold office until September 30, 1908.

The national council to cause a new edition of bills to be printed, to be exchanged for those deteriorated. For this purpose, they may appropriate the sum of \$250,000 gold, to be taken from the funds they shall receive for the purposes of amortization.

A. M. BEAUPRÉ, *Minister*.

BOGOTÁ, COLOMBIA, *October 30, 1903.*

TEXT OF THE NEW COLOMBIAN MONETARY LAW.

The Congress of Colombia decrees:

ARTICLE 1. The gold dollar of 1 gram 672 milligrams of weight (1.672) and 900 milésimos fine (0.900) shall be established as the monetary unit of the nation. Obligations contracted by the Government before the coming into force of this law, for the payment of gold of other denominations than that established by the present article, shall be payable in the money contracted for.

ART. 2. National gold coinage, minted in accordance with título 9 of book 1 of the fiscal code, and the genuine gold coinage of foreign countries, not under 0.900 fine, may circulate at their commercial value in all public and private transactions; and silver national coinage 0.835 and 0.900 fine and foreign silver coinage 0.900 fine may circulate under the same conditions.

ART. 3 From the date of the passing of this law the increase in the emission of paper money is absolutely prohibited, both by the National Government and by the departmental governments.

ART. 4. The paper money legally entitled by the national and by the departmental governments preserves its character of bills of forced currency and its liberatory power in those places where it circulates at the present time, subject to the following rules:

1. In public and private transactions it is permissible to stipulate either in the gold monetary unit or in paper money.

2. When, according to the above paragraph, a contract is made which stipulates payment in gold, that contract is complied with by the payment of an equivalent sum in paper money at the rate of exchange ruling on the day of payment.

3. In the provinces of Cucuta, San Juan, and Atrato the silver coinage shall retain its character as a circulating medium in relation to the gold standard, the relation of the two to be fixed according to the market price of silver, and the latter coinage may be stipulated for in contracts.

4. Obligations which have been or may be contracted with foreign houses must be complied with in accordance with the provisions of article 203 of the code of commerce.

5. All obligations contracted for in legal tender (*moneda corriente*), in which no special class of money is stated, will be understood as having been contracted for and will be payable in bills of the forced currency.

ART. 5. A council shall be created, called the council of national amortization, composed of five members, to be appointed in the following manner: Two by the Senate, two by the Chamber of Representatives, and one by the executive power. They shall be chosen from the most distinguished of those connected with commerce and industries and known for their rectitude and competency. For each member of the council two supplementary members shall be appointed in the same manner. The council shall dictate its own rules on the following bases:

1. The gold, which the council shall collect, shall be sold in lots amounting to 1,000 pesos for paper money at public auction.

2. The paper money, which the council shall collect by the sale of gold or by contributions, shall be publicly burned by the commission.

3. The council has judicial and independent authority in the management of the funds confided to it.

4. The council has the power to determine the number and category of its subordinate employees and to fix the corresponding remuneration. The council will make the appropriation necessary for the carrying on of its work from the funds at its disposal.

5. The council of national amortization shall fix the daily rate of exchange in Bogotá, which shall be the ruling rate in the levying of taxes and in the liquidations made by the treasury. It shall also provide for the fixing of the same in the Departments for the same purposes. As a basis for the fixing of exchange the council shall be guided by the transactions effected in the open market.

ART. 6. The rate of exchange as fixed by the preceding article shall be regarded as the ruling rate for judicial purposes.

ART. 7. When the council of national amortization shall not have fixed a new rate of exchange, the rate last fixed shall be the ruling one.

ART. 8. The council of national amortization shall nominate, on its own responsibility, in the capitals of the Departments and in other places where it may be, cosectional councils of amortization for the changing of deteriorated bills for new ones, of one kind of paper for another, and buying, in public auction, paper for the purpose of redeeming the same in exchange for drafts on the national council of amortization, and for burning paper.

ART. 9. For the present, the following sources of income are to be destined for the redemption of the paper money, and they shall be manipulated by the national council of amortization:

1. The entire rents from the emerald mines of Muzo and Cosquez.

2. Those from the mines of Santa Ana and La Manta.

3. Those from the mines of Supia and Marmato.

4. Those from the pearl fisheries of the entire coast of the Republic.

5. The proceeds from the exploitation of the national woods.

6. The proceeds from harbor and light-house dues, tonnage, etc.

7. The proceeds from the export duty on the nut known as vegetable ivory. The duty may be fixed by the Government at the same amount as that levied by the Republic of Ecuador on the export of the above-mentioned article. Also the whole proceeds from the export duties which may be established in the law on customs tariff.

In the management of these rents the council will proceed in accordance with the general provisions of the fiscal code, but may rent for a period amounting to ten years the mines of Muzo and Cosquez.

ART. 10. The estimates of income and expenditures will be made out in the monetary units of gold established in article 1 of this law.

1. Customs duties will be levied in gold or in bills at the rate of exchange ruling on the day of payments.

2. The proceeds from the renting of national property, such as the mines of Muzo and Cosquez, Santa Ana, and La Manta, the pearl fisheries, and the exploitation of the national woods, etc., when they are rented or when there has been a renewal of contracts, shall be levied exclusively in gold.

3. The remaining national, departmental, and municipal rents shall be fixed in gold, but levied in paper, at a fixed exchange for periods of three months.

4. Those charged with the making of this liquidation shall proceed to adjust their operations according to the provisions of the present law, by which provisions they shall alter the existing estimates.

5. For the fixing of the exchange in the quarterly liquidations the figures of the national council of amortization shall be taken as a basis; but for the first quarter after this law shall have come into force these reductions shall be made at the rate of 10,000 per cent.

ART. 11. The national council of amortization, as responsible to the treasury, shall transmit its accounts to the national court of that Department, shall take possession before the Ministry of the Treasury, and shall enjoy free postal and telegraphic communication.

ART. 12. The council shall publish monthly, in the *Diario Oficial*, the account of its collections and the details of all operations.

ART. 13. The personnel of the national council of amortization to be renewed every four years, but those appointed this year to retain possession of their offices till September 30, 1908, in which year a new election shall be held.

ART. 14. The members of the national council of amortization shall each enjoy a salary of \$600 gold, which, as also the remuneration of the subordinate employees, shall be drawn from the funds administered by the council.

ART. 15. The national council of amortization will dictate the necessary measures for changing the bills emitted by the Government for a new emission, which shall lend sufficient guaranties against falsifications.

1. The council may appropriate the sum of \$250,000 for the above purpose, to be taken from the funds collected for the purpose of amortization.

ART. 16. All legal provisions contrary to the present law are hereby amended and abrogated.

Given at Bogotá the 25th of October, 1903.

AGRICULTURAL FESTIVAL IN GUATEMALA.

(From United States Consul-General Winslow, Guatemala City, Guatemala.)

On the last Sunday of October of each year a festival dedicated to Minerva begins at Guatemala City, which lasts three days and is devoted to education, the arts, industries and agriculture, commerce, etc. It is under the auspices of the Government, and the one beginning October 25, 1903, was a decided success from every point of view. The children are given a prominent place in these festivities in order to interest them in their studies and to stimulate the desire for education in general. It is at these festivities that the rewards for merit for all the public and private schools of Guatemala City are publicly given out in the temple dedicated to Minerva, and the children are much in evidence. Pavilions erected near by are devoted to the other features of the festival. Important among these for this year was the department of agriculture. It was quite extensive and well arranged. The exhibits were really fine and showed what may be expected from the agricultural resources of this fertile country. There are few countries on the face of the earth that can successfully cultivate such a variety of fruits, vegetables, and grains as the Republic of Guatemala. Along the coast tropical fruits, woods, coffee, etc., are grown in profusion,

while on the table-lands corn, apples, pears, and potatoes are grown luxuriantly with very little attention; here the domesticated animals also thrive.

American farm machinery was in evidence and in each case received the highest awards. I noticed machinery from P. M. Sharples, of Westchester, Pa.; H. H. Palmer & Co., of Rockford, Ill.; the Aspinwall Manufacturing Company, of Jackson, Mich.; and the Deering Manufacturing Company, of Chicago, Ill. Such enterprise is sure to meet with success. Others ought to emulate those exhibitors.

The finest horses and cattle were imported stock, coming from the United States.

ALFRED A. WINSLOW,
Consul-General.

GUATEMALA CITY, GUATEMALA, *November 2, 1903.*

TRADE OF HONDURAS.

(From United States Consul Wood, Ceiba, Honduras.)

FRUIT TRADE.

The most important industry in this consular district is the raising and cultivation of bananas. The United States takes the entire crop. The last year has been a very satisfactory one and good prices prevailed. The area of cultivated ground has been considerably increased. Quite a number of orange, lemon, and rubber trees have been planted, and the exportation of these products is expected to increase.

TRANSPORTATION.

There are no railroads in this part of the country. Inland transportation is furnished by horses and mules over roads for the most part nothing but trails, which in the rainy season are sometimes impassable on account of the many rivers to be forded. Most of the banana plantations are provided with ox carts to haul their produce to the shipping point. Some of the rivers are navigable for short distances, and lighters are used on these. Ample transportation along the coast is supplied by fruit steamers and sailing vessels. There are no wharves here and loading and discharging are done from the open beach; this work is often very difficult during foul weather. Heavy articles are handled with the greatest difficulty, and their transportation to the interior is impossible.

IMPORT REQUIREMENTS.

Consular invoices, to be taken out before a Honduras consul, are required for goods destined for exportation to this Republic. Invoices must show gross and net weights, valuations of each article, and packages must be numbered. The charges for these consular invoices for Honduras in United States currency are as follows: Shipments amounting in value to \$100, \$2.50; from \$100 to \$500, \$3.50; from \$500 to \$1,000, \$5; from \$1,000 to \$3,000, \$6; from \$3,000 to \$6,000, \$6.50; for every additional \$1,000, 50 cents.

HOW TO INCREASE AMERICAN TRADE.

American merchants should study carefully the wants and wishes of the country and act accordingly. The sale of articles not wanted can not be forced, no matter how cheap they may be. Suggestions from merchants here should be acted upon and not treated with indifference by American exporters, as is often done, according to my information. Many complaints have arisen in the past on account of American shippers not following shipping and packing instructions. Competent agents with a knowledge of the goods they represent and speaking the language of the country are almost necessary in introducing goods.

DEAN R. WOOD, *Consul*.

CEIBA, HONDURAS, *November 1, 1903.*

CONSUMPTION OF BANANAS IN THE UNITED STATES.

Supplementary to the foregoing report of Consul Wood, the following statistics showing the value of bananas declared for export to the United States during the fiscal years ended June 30, 1902 and 1903, are given:

Bananas declared for export to the United States.

Country.	1902.	1903.	Increase.
British Honduras.....	\$115,803	\$129,512	\$13,709
British West Indies.....	3,390,230	3,904,341	514,111
Colombia.....	601,072	635,200	34,128
Costa Rica.....	1,616,195	1,956,805	340,610
Dominican Republic.....	94,617	97,500	2,883
Guatemala	83,433	91,870	8,437
Honduras.....	749,681	1,097,066	347,385
Nicaragua.....	446,006	842,220	396,214
Total	7,097,037	8,754,514	1,657,477

BAÑANAS IN COSTA RICA.

According to a report from the British consul at Port Limon, the area under banana cultivation in Costa Rica continues to increase rapidly, over 2,500 acres of new plantations having been made during the year 1902, and the number of bunches exported shows an increase of 7.86 per cent over the figures for 1901. The export of this fruit to the United States was begun in 1881 and has grown from 3,500 bunches in that year to 4,179,199 bunches in 1902. Steamers to the number of 230, laden with bananas, cleared from Port Limon for the United States in 1902. During 1902 a cargo of bananas was shipped to Bristol by the United Fruit Company, and it turned out sufficiently well to warrant the establishment of a regular monthly fruit service between Limon and Bristol and Manchester, which during 1903 has become a fortnightly service.

BANANA-INSURANCE SCHEME.

At a meeting of banana planters and shippers at Kingston recently, the governor presiding, a committee was appointed to inquire into various proposals for effecting a banana-insurance scheme. Opinion was unanimously against an export tax. Sir Daniel Morris urged that alternative industries should be started.

KAOLIN DEPOSITS IN ST. CHRISTOPHER.

(From United States Commercial Agent Haven, St. Christopher, British West Indies.)

Samples of kaolin, or china clay, taken from a great bank deposit on Ottley's estate, Cayon, St. Christopher, was sent to experts for analysis, with the following results:

Description.	Per cent.	Description.	Per cent.
Silica.....	56.06	Carbonic acid.....	0.09
Alumina	30.50	Combined water and organic matter...	11.58
Oxide of iron.....	.57	Total.....	99.91
Magnesia .....	.61		
Alkalies.....	.50	Moisture in sample as received.....	34.42
Phosphoric acid.....	Trace.		

The analysis was made by Prof. John Clark, of the city analyst's laboratory, of Glasgow, Scotland, who, in forwarding the results of his analysis, wrote:

The results of my analysis indicate that this is kaolin, or china clay, and I am of the opinion that it is of sufficient purity for pottery purposes.

This clay bank seems to contain a great quantity of the deposit, there being 3 or 4 feet of red clay, such as is used for ordinary pottery, above the white deposit of which the foregoing is the analysis.

The red-clay pottery made by the natives of the adjacent island of Nevis is much used in households throughout these islands. This ware, if unglazed, is somewhat porous and is universally used for water jugs, pitchers, etc. A jug filled with water, placed in a window or in the open air, quickly becomes quite cold—a great boon to the natives in a tropical country, where artificial ice is an unknown quantity to the majority of the population, it being worth 2 cents a pound.

The bank of clay in question is easy of access, Ottley's estate being near the village of Cayon, which is 5 miles from Basseterre, the chief seaport of St. Christopher.

Day laborers (colored) are to be had in any number and labor is cheap. The average field laborers on the sugar estates receive from 16 to 25 cents a day, without food. Women and children work also in the field and receive from 6 to 12 cents per day.

As yet no work has been done on this clay bank, as the idea of its being profitable as an export product is recent. The freight to New York on clay in bulk would be \$3 per ton.

JOSEPH HAVEN, *Commercial Agent.*

ST. CHRISTOPHER, BRITISH WEST INDIES, *November 20, 1903.*

NEW PATENT LAW OF MEXICO.

(*From United States Vice and Deputy Consul-General Conley, City of Mexico, Mexico.*)

The following is a translation of the new patent law of the Republic of Mexico. It is a very careful translation by Mr. L. C. Simonds and was taken from recent issues of the Mexican Herald, published in the City of Mexico:

CHAPTER I.

Concerning patents.

ARTICLE 1. All persons who may have made a new invention of an industrial character may acquire the exclusive right, by virtue of the provisions of articles 28 and 85 of the constitution, to exploit it for their own benefit during a certain period of time, subject to the rules and conditions contained in this law. In order to acquire this right it is necessary to obtain a patent of invention.

ART. 2. The following are patentable:

- I. A new industrial product.
- II. The application of new means to obtain an industrial product or result.
- III. The new application of known means to obtain an industrial product or result.

ART. 3. The following are not patentable:

I. A discovery or invention which simply consists in bringing to light or making evident something that already existed in nature, even though before the invention it was unknown by men.

II. Scientific principals or discoveries of a purely speculative nature.

III. Inventions or discoveries of which the exploitation may be contrary to prohibitive laws, the public safety or health, to decency or morality.

IV. Chemical products; but new processes to obtain same and new industrial applications therefor are patentable.

ART. 4. An invention is not to be considered as new when, either in this country or abroad and prior to the patent application, it has already been carried out for a commercial or industrial purpose or has received, by means of a printed publication, sufficient publicity to be put in practice, for in such case the invention is considered to have become public property.

ART. 5. The precept contained in the foregoing article does not apply to the author of the invention in question nor to the owner of a patent obtained abroad in respect to said invention in the following cases:

I. When the publicity is due to the presentation of the invention at a local, regional, or international exposition, which is either official or officially recognized; provided that, prior to such presentation, the documents mentioned in the rules of practice be deposited in the patent office and that the application be presented in the same office before the expiration of three months after the official closing of the exposition.

II. When the owner of the foreign patent presents his application for the issuance of a patent in Mexico within three months counted from the day on which, in accordance with the law of the country in which said foreign patent was issued, the invention in question becomes public.

In the event of there being two or more foreign patents, the period of three months will be counted with respect to the patent which may first have received publicity.

III. When the application is presented within the periods of time provided by international treaties applicable to the case or within the period of twelve months referred to by article 12.

In case two or more of the kinds of publicity, to which this article refers, coincide and when, after making the necessary commutation, it is found that the periods of time do not terminate on the same day, the interested party will be obliged to present his application within the period of time which terminates first.

Moreover, the periods of time referred to by Section III prevail over the others, and, therefore, in the event of coincidence, the interested party will enjoy the full benefit of them, even though they be longer.

ART. 6. The owner of a patent has the exclusive right—

I. To exploit it, for his own benefit, during the term allowed by this law, either personally or through others with his permission.

II. To prosecute before the tribunals those who infringe upon his right either by the industrial manufacture of the patented article or by the industrial use or employment of the patented process or method, or because for a commercial purpose they keep in their possession, offer for sale, sell, or introduce into the national territory, one or more of such articles manufactured without his consent.

In the case of industrial manufacture, the malicious intention is not necessary for penal liability; but that intention is indispensable in the case of the other contingencies provided for in this Section II.

ART. 7. Notwithstanding what is provided in the foregoing article the patent produces no effect—

I. Against similar objects which in transit pass through the national territory or tarry in its territorial waters.

II. Against a third party who was already exploiting the same patented object in the country prior to the date on which the patent application was presented or who had made the necessary preparations to exploit it.

III. Against a third party, who, for experimental or studious ends, constructs an object or conducts a process which is the same, or substantially the same, as that patented.

ART. 8. A patent may be granted to two or more persons conjointly if they conjointly solicit it.

CHAPTER II.

Concerning the application and granting of patents.

ART. 9. Any person who desires to obtain a patent must present to the patent office a petition accompanied by the following documents:

I. A specification.

II. A claim.

III. A drawing or drawings if the case requires them in the opinion of the inventor.

IV. Two copies of the foregoing documents.

ART. 10. The patent office will make a purely administrative examination of the documents presented in order to ascertain whether they are complete and whether they satisfy the requirements of form laid down by the respective rules of practice.

In consequence this examination will on no account turn upon the novelty or utility of the object sought to be patented nor upon the sufficiency, clearness, and exactness of the documents.

If the patent office finds that the documents do not satisfy the requirements as to which it is competent to examine them or that the object for which a patent is sought comes under the provisions of Section III, article 3, it will consider the documents as not having been presented, and, by means of a notice, will so inform the interested party. If the interested party is not conformable, he may have recourse to the tribunals, as provided by Chapter XII of this law.

In case the patent office is satisfied with the regularity of the documents presented, it will, by means of a notice, inform the interested party to that effect.

ART. 11. The legal date of a patent is the date of the legal presentation, at the patent office, of the petition and documents which constitute it, and from that date it is supposed to have been granted and produces its legal effects, save as provided in the following article.

In the case of Section I, article 5, the legal date of the patent will be that on which the petition referred to in said section is presented.

ART 12. The legal date of a patent, solicited in Mexico and already applied for by the same person in one or more foreign states, will be that appertaining to the foreign patent first applied for, provided that it be applied for in Mexico within twelve months counted from the date of the first patent application abroad, in the case of a patent of invention, or within four months from the same date in the case of a patent for an industrial design or model, and provided also that the foreign state in which the patent was first applied for grants the same right to citizens of Mexico.

In consequence all patents applied for in Mexico under these conditions will have absolutely the same force and will produce the same effects as if they had been applied for on the day and hour of their legal date.

ART. 13. Patents will be granted without prejudice to third parties and without guaranty as to their novelty or utility. Their issuance only constitutes a

presumption as to those qualities and of the rights of the holder, until the contrary is proved.

ART. 14. He who, without being the author of an invention, applies for a patent must accredit his character as representative or attorney of the author. In order to accredit the character of representative or attorney, a simple letter of authorization signed by the author and two witnesses will suffice. But the patent office will be empowered to demand the ratification of the signatures when it deems fit.

CHAPTER III.

Concerning terms and fiscal dues.

ART. 15. Patents of invention are granted for a period of twenty years, counted from their legal date.

ART. 16. This period is divided into two—the first of one year and the second of nineteen years.

ART. 17. The tax for the first period of one year is \$5.

The tax for the second period, or for the remaining nineteen years, is \$35.

The rules of practice will determine the fiscal dues payable for copies, issuance of certificates, replacement of title deeds, etc.

The payment of all these dues will be effected strictly in stamps of the federal stamp revenue in the form provided by the rules of practice.

ART. 18. The period of time fixed by article 15 may be extended for five years longer, within the discretion of the Executive, subject to the payment of the additional dues which said Executive may see fit to fix.

He who desires to obtain the concession referred to by this article must address a petition to the patent office within the penultimate half-yearly period of the ordinary term of twenty years.

He must also prove that the patent has been in uninterrupted industrial exploitation in the national territory for at least the last two years immediately preceding the date of his application.

CHAPTER IV.

Concerning exploitation.

ART. 19. The exploitation of a patent is not obligatory; but if after the expiration of three years, counted from its legal date, it is not exploited industrially within the national territory, or if after the expiration of those three years its exploitation has been suspended for more than three consecutive months, the patent office may grant to third parties a license to effect said exploitation in the form set forth in the following articles:

ART. 20. Any person desiring to obtain a license such as referred to in the foregoing article will have recourse to the patent office, setting forth the reasons or grounds whereon he bases his petition. This petition will be referred to the owner of the patent and an unextendible term of one month will be given within which both sides may present to the office such proofs as they may deem expedient. Within that same period the office will be entitled to ask for information, to appoint inspectors, and in general to do everything which, without departing from its character as an administrative authority, it may consider expedient to do in order to ascertain the true facts.

ART. 21. When the owner of the patent in question shall not prove that he has commenced industrially to exploit the object of said patent in accordance with the provisions of article 30, no evidence on his side will be accepted, but forthwith and without allowing the period for proofs mentioned in the foregoing article the license requested will be granted to the applicant.

ART. 22. Within fifteen days, counted from the expiration of the period for the rendering of proofs provided by article 20, or within eight days, counted from

the presentation of the application for license under the terms of the foregoing article, the patent office will decide as to whether the license asked for is or is not to be granted.

A party in interest who is not conformable with this resolution will be entitled to have recourse to either of the district judges of the City of Mexico, with a view to the revocation of said resolution, acting in the capacity of plaintiff, while the other interested party will act as defendant, the former being obliged to present his suit within the unextendible term of eight days counted from the date whereon the administrative resolution is communicated to him, with the understanding that, if he does not so present his suit, he will be considered as having desisted from this action and as conformable with the resolution in question.

The trial held before said judge in these cases shall be subject to the provisions of this law.

ART. 23. The effects of the administrative resolution granting the license asked for shall not be suspended because the owner of the patent has had recourse to the judicial authority; so that the person who has obtained the license is entitled to exploit the patent at once without the obligation of giving a bond or of complying with any other requirement.

ART. 24. The person who has obtained a license of the kind in question will be obliged to begin the exploitation of the patent within a period of two months counted from the date of the resolution, if said resolution was handed down by the patent office, or from the date of the legal notification thereof, if the resolution was dictated by a judicial authority, and must not suspend said exploitation for more than two consecutive months.

ART. 25. One-half of the net earnings obtained by the owner of a license as the result of the exploitation will belong to the patentee, who, therefore, will be entitled to exercise vigilance over said exploitation and to demand, judicially, if necessary, the payment of that half.

The provisions of this article are without prejudice to any agreement or agreements into which the parties concerned are entirely free to enter.

ART. 26. In case the owner of the patent is absent or fails to present himself to enforce his rights, the owner of the license will be obliged to deposit every two months the half of the profits referred to in the foregoing article in such bank or institution of credit as shall be designated to him by the patent office, and, moreover, he must keep that office informed as to the proceeds of exploitation and the net earnings by means of bimonthly reports.

Failure to comply with the requirements of this article will cause the patent office, at the request of the owner of the patent, to revoke the license granted.

The necessary notices will be published in the Official Patent Gazette; if the person obliged to give these notices shall give false information therein to the office, he will be liable to the penalty of major arrest and a fine of the second class, or to one or the other penalty, within the discretion of the judge; and, in any event, he will be liable for damages to the owner of the patent.

ART. 27. The licenses that may be granted in accordance with the foregoing articles by the patent office do not deprive the patentee of the right of exploiting the invention himself and of granting such licenses as he may desire.

ART. 28. The patentee is entitled to ask for the revocation of a license granted by the patent office when, after two years from the granting of the license, the owner of the patent, or any other person in his name, shall be exploiting the patent industrially.

The indispensable requisite for the taking into consideration of the petition in question is a demonstration on the part of the patentee to the patent office, in accordance with article 30, that the exploitation has been initiated; for otherwise the

petition will be forthwith rejected, and against this resolution there shall be no recourse.

It will also be an indispensable condition for the acceptance from a licensee of proofs that he has initiated the exploitation within the period of two month allowed him by the law, that he shall, within the proper time, have forwarded to the patent office the evidence alluded to by said article 30.

In other respects the method for bringing about the revocation referred to by the first paragraph of this article will be subject to the provisions of articles 20, 21, 22, and 23 in so far as they are applicable.

ART. 29. A patentee is entitled to prosecute before the tribunals as an usurper of his patent, or as an illegal operator thereof, the holder of a license granted by the patent office who has not commenced the exploitation of the patent within the period of two months allowed by article 24 or who has suspended the exploitation for more than two consecutive months, and who nevertheless shall be exploiting the patent, save in the event of the suspension having been due to a fortuitous contingency or to force majeure.

ART. 30. Both the patentee and the person to whom the patent office shall have granted a license for the exploitation of the patent are under the obligation, when they shall have commenced said exploitation, to afford evidence thereof in any legal manner to said office within a period of time not exceeding fifteen days.

ART. 31. All patented articles will bear a mark showing that they are patented within the number and date of the patent.

CHAPTER V.

Concerning the title deed and seal.

ART. 32. Patents will be issued in the name of the President of the Republic by the patent office and will be signed by the Minister of Fomento. They will set forth:

The patent number.

The name of the person or persons to whom they are granted.

Their duration.

The object for which they were granted.

Their legal date and the date of their issuance.

And they will be sealed with the special seal of the patent office.

The patent, with one copy of the specification, claim, and drawings, when there are any, will constitute the title deed accrediting the rights of the patentee.

ART. 33. The force of the patent applies only to the contents of the claim, the specifications and the drawings, if there are any, only serving to explain the contents of said claim.

ART. 34. There will be in the patent office a special seal which will serve to legalize patents.

CHAPTER VI.

Concerning official publicity.

ART. 35. The patent office will publish in the Official Patent and Trade-Mark Gazette, at least every two months, a list of patents granted and at least annually will publish a special book containing the claim and one or more of the drawings of each patent.

CHAPTER VII.

Concerning examination.

ART. 36. The patent office will, at the request of an interested party, make, with respect to the novelty of a patent asked for, an examination without guaranty. The result of this examination will be communicated in writing to the interested party.

This examination will also be made at the request of anyone for the purpose of ascertaining whether an article is patented in Mexico or is public property.

In order to obtain this examination the method laid down in the rules of practice of this law must be followed.

CHAPTER VIII.

Concerning the transmission of patent rights.

ART. 37. The rights conferred by a patent may be transferred, wholly or in part, by any of the means provided by law for the transfer of any other right. But no act of transfer or any other involving a modification of the rights in question can prejudice a third party if it has not been registered in the patent office.

The rules of practice will fix the tax to be paid for this registration, which must not exceed \$20.

CHAPTER IX.

Concerning expropriation.

ART. 38. A patent of invention may be expropriated by the Federal Executive on the ground of public utility, causing the invention immediately to become public property, subject to prior indemnification and to the same formalities provided by the laws in force on the subject for the expropriation of real estate in so far as they are applicable.

When the invention consists of a new weapon, warlike instrument, explosive, or, in general, any improvement in machines or munitions of war, capable of being applied to the national defense, and which, in the opinion of the Federal Executive, ought to be utilized only by the National Government, the expropriation effected with the same formalities as are mentioned in the foregoing paragraph may include not only the patent, but also the invention, even though not yet patented, and in these cases the invention will not become public property, but the Government will become the exclusive owner both of it and of the patent when issued.

ART. 39. The patent office will not make public an expropriated patent when the expropriation has occurred under the circumstances alluded to in the second paragraph of the foregoing article.

CHAPTER X.

Concerning the forfeiture and annulment of patents.

ART. 40. Patents are forfeited—

I. At the expiration of the one-year period mentioned in article 16, if, before its expiration, the dues for the second period have not been paid.

II. At the expiration of the second period mentioned by article 16.

III. At the expiration of the extension, when one has been granted.

ART. 41. The patent office will publish in the Gazette the name and number of each of the patents forfeited.

ART. 42. Patents are null—

I. When they contravene the provisions of articles 3, 4, 5, and 102.

II. When the claim is not sufficiently clear and explicit, so that it is impossible to ascertain therefrom what is claimed as new.

III. When there is not sufficient clearness and precision in the specification and drawings, so that, in the opinion of experts, they are not sufficient, taken together, to enable a person to construct or produce what they purport to describe.

IV. When the object secured by the patent is distinct from that for which it has been solicited.

V. When previously another similar patent has been granted in the country or abroad, even though it may have been forfeited.

ART. 43. A patent can only be nullified by a judicial authority and only on the ground of one of the causes enumerated in the foregoing article.

ART. 44. The right to take action for the annulment of patents appertains to anyone who considers himself aggrieved thereby, and to the Federal Attorney-General in cases in which the Federation has an interest.

ART. 45. The district judges of the capital of the Republic are competent to suits for the annulment of patents, saving the provisions of articles 46 and 62.

In case jurisdiction belongs to the district judges, the procedure set forth in Chapter XIII will be followed.

ART. 46. Nullity and forfeiture may be pleaded as a defense, and in that case the judge before whom the suit has been brought will be competent to consider them.

ART. 47. The final sentence decreeing the annulment of a patent will be communicated by the tribunal or judge that has delivered same to the patent and trade mark office, which will cause it to be published in the *Diario Oficial* and Patent Gazette; it will also enter it upon the registry of patents and will append a note thereof to all entries referring to that patent.

CHAPTER XI.

Concerning the penal and civil liability of those who infringe patent rights.

ART. 48. The industrial manufacture of patented articles and the employment for a commercial or industrial purpose of patented methods without the consent of the patentee will be chastised with a fine of from \$500 to \$2,000 and with one to three years' imprisonment, or with one or the other penalty, at the discretion of the judge.

ART. 49. The malicious use, for a commercial or industrial purpose, of patented objects will be chastised with a fine of from \$50 to \$1,000 and with imprisonment of from six months to two years, or with one alone of those penalties at the discretion of the judge.

ART. 50. The burden of proving that the manufacture is not industrial and that the use is neither commercial nor industrial lies upon the accused party.

ART. 51. A fine of from \$5 to \$500 and major arrest, or one or other of those penalties, at the discretion of the judge, will be visited upon the person who maliciously—

I. Vends, puts upon sale or in circulation patented objects that have been manufactured without the consent of the patentees.

II. Imports, for an industrial or commercial purpose, articles protected wholly or in part by a patent without the consent of the patentee.

III. Vends, puts on sale or into circulation products obtained by patented methods without the consent of the patentee.

ART. 52. All other malicious acts not included among those enumerated in the foregoing articles and which in any manner restrict, hamper, or prevent the legitimate exercise of the rights which this law grants to the patentee, will be chastised with a fine of from \$5 to \$500 and with major arrest, or with either of those penalties, at the discretion of the judge.

ART. 53. In case of the repetition of an offense an augmentation of one-half of the prescribed penalties will be imposed for the first time, and for each new repetition another extra half will be added to the penalty.

All persons will be regarded as relapsed offenders who shall have committed the new delinquency imputed to them before the expiration of five years from the final sentence whereby they were declared guilty of any of the transgressions mentioned by this law and even though the former transgression related to a patent other than that affected by the new transgression.

ART. 54. When a delinquency or transgression is committed for which this law makes no provision and for which a penalty is provided in the penal code of the Federal District, and also when the general rules as to delinquencies and transgressions, degrees of intentional culpability, accumulation of guilt, application of penalties, criminal and civil liability, are concerned, provided the present law contains no special precept as to such matters, then the rules laid down in said penal code will be observed and its precepts are, therefore, declared obligatory throughout the Republic when patents of invention are involved.

ART. 55. Penal action for the prosecution of persons guilty of the delinquencies referred to by this law can only be initiated and carried on by virtue of a complaint and suit brought by the patentee; and another indispensable requisite for the chastisement of the guilty party is that the objects protected by the patent in question, or the wrapping in which they are put up, bear a mark indicating that the object is patented, with the number and date of the patent.

Those who may be exploiting something which, in the opinion of the patent office obtained prior to the presentation of the complaint, is held to have become public property will not incur penal liability.

Nor will penal liability be incurred by persons who under a patent may be exploiting something which, in the opinion of the patent office obtained prior to the presentation of the complaint, is held to have been new when the patent was applied for.

ART. 56. In addition to the penalties mentioned by articles 48, etc., infringers will forfeit all the objects illegally manufactured and the utensils and instruments destined specially for their manufacture, which will be adjudicated to the patentee. If any of the products have been already sold, the guilty party will be condemned to pay to the patentee a sum equivalent to the value of those products.

ART. 57. A patentee will also be entitled to exact damages from infringers, and the suit for this purpose must be instituted before a local or federal judge according to circumstances. The suit may also be instituted as an incident in the criminal case in accordance with the provisions of the articles of this law that determine the judicial procedure that governs this department.

ART. 58. Civil actions will be instituted and carried on as provided by Chapter XIII of this law.

ART. 59. The plaintiff may ask the judge to seize objects illegally manufactured and utensils and instruments specially destined for such manufacture and to appoint, on his own responsibility, a receiver therefor. But the following are indispensable conditions for the exercise of this right:

I. That the patent in question be presented, with the opinion of the patent office that the invention was new when said patent was applied for.

II. Proof, by means of the title deed, duly registered in the patent office, that the plaintiff is the present owner of the patent.

III. Proof, by any legal means, that the illicit manufacture or exploitation, which serves as the basis for the complaint, really exists.

The fact that the objects illicitly manufactured are the same, or essentially the same, as those protected by the patent, must necessarily be proved by means of a skilled report signed by three experts, who, under oath, will ratify said report before the judge.

IV. Proof, by any legal means, that the objects protected by the patent in question bear a mark showing that they are patented, as well as the number and date of the patent in question; or, if the objects do not lend themselves to this requirement, that the fact of their being patented and the number and date of the patent have been displayed on the cases or wrappings in which the objects are put up when being sold to the public.

V. That a bond which is sufficient in the opinion of the judge be given.

Likewise, during the course of the suit, the seizure referred to in this article may be requested, provided that the requirements above enumerated be complied with.

ART. 60. In the same cases, and subject to the same requirements as provided in the foregoing article, the plaintiff may ask that the employment of patented methods and processes be stopped, and then the judge will notify the defendant to abstain from using them until further order. In this case the requirement expressed in Section IV of the foregoing article will not be necessary.

If the person thus notified shall not obey the order, he may be pressed according to law, and, if necessary, the factory or workshop in question will be ordered closed for as long a time as may be considered necessary.

ART. 61. The measures spoken of in the foregoing two articles, and the prior measures undertaken to warrant them, will be dictated without a hearing being granted to the defendant and on the sole responsibility of the plaintiff, who will be obliged to pay damages accruing on this score to the defendant, either because the plaintiff fails to bring the penal or civil suit required by the circumstances within fifteen days following the date on which the seizure was effected or the prohibition issued, or because the defendant is acquitted, or because the suit is discontinued.

In these cases the seizure referred to by article 59 will be immediately removed or the prohibition to employ the patented method or process spoken of by article 60 will be countermanded.

ART. 62. The judge who tries the delinquencies spoken of in the foregoing articles will also decide as to the nullity, forfeiture, or ownership of the patent when these questions are raised as a defense against penal action, and the sentence delivered on the subject will be communicated to the patent office.

ART. 63. A fine of \$50 to \$1,000 and major arrest, or one of said penalties, will be imposed upon the person who marks his products as patented when they are not.

The prosecution of this delinquency may be instituted at the instance of an interested party or of the prosecuting attorney, and a suit of this nature, as well as all the penal suits to which this chapter refers, will, in any event, be prosecuted *ex officio* when once initiated.

ART. 64. The tribunals of the Federation are competent to try controversies growing out of this law in the following cases:

I. When the validity or nullity of the patent is the issue, or when it is maintained that the Executive had no power to issue it or issued it without the legal requirements.

II. When objects, processes, or methods are announced as patented without being so.

III. When the patent is the property of the nation.

IV. In any other case in which the Federation is concerned or federal interests are affected.

V. When the object is to bring about the revocation of the acts or decisions of the patent office.

In the cases covered by Sections I, II, and V, the district judges of the City of Mexico will be competent.

In the cases referred to in Sections III and IV, the competent judges will be the district judges to whose jurisdiction belongs the domicile of the defendant, if the suit is a civil one, or to whose jurisdiction belongs the place where the delinquency was committed, if the suit is a penal one.

ART. 65. In penal and civil controversies arising out of the application of this law, but in which the interests of private persons only are at stake, the judges competent to try and adjudicate them will be the judges of ordinary jurisdiction as provided by law.

ART. 66. The contents of the foregoing articles do not prevent the carrying out of articles 46 and 62 of this law in cases wherein those precepts are applicable.

CHAPTER XII.

Concerning the procedure to obtain the revocation of administrative resolutions.

ART. 67. In cases wherein interested parties are not conformable with an administrative resolution of the Department of Fomento or the patent office, they may, within fifteen days from the communication of that resolution, have recourse to either of the district judges of the City of Mexico, setting forth the reasons of their unconformableness.

ART. 68. If they shall not have done this before the expiration of the period to which the foregoing article refers, the administrative resolution will hold.

ART. 69. The complaint will be made by presenting a written statement, with a simple copy of the latter, which will be compared with the original by the court.

The copy of the written statement will be sent within twenty-four hours to the patent office in order that it may render a report within eight days.

ART. 70. As soon as the report is received both it and the complaint will be referred for three days to the prosecuting attorney in order that he may formulate his pleading in the capacity of defendant, representing the Department of Fomento.

ART. 71. If there should be necessity for proofs, a period of time not exceeding ten days shall be opened therefor, and at the expiration of that period a hearing, within three days at the latest, will be fixed, at which the judge will listen to the pleadings of the interested parties and will hand down a decision within five days, whether the parties concerned have appeared or not.

This decision shall be open to appeal in both effects, and the appeal must be taken within the unextendible period of five days.

ART. 72. If an appeal is taken against this sentence the dossier will at once be sent to the proper circuit tribunal, which, after a single hearing to be convoked at the latest within five days, will hand down its decision within five days more, sending a copy thereof to the patent office for enforcement.

ART. 73. A copy of the definite sentence will be sent to the authority whose resolution is being appealed from.

ART. 74. If the sentence should declare that there were no grounds for the opposition of the interested party against the administrative resolution, a fine of from \$5 to \$25 shall be imposed on him.

CHAPTER XIII.

Procedure for civil suit.

ART. 75. Civil suits arising from this law will be carried on and decided summarily by means of the procedure set forth below, saving the provisions of the foregoing chapter and the provisions for criminal suits.

ART. 76. The period for answering the suit will be five days.

ART. 77. No issues requiring prior and special adjudication can be raised, except such as involve the legal character of one of the litigants or the competence or incompetence of the judge.

ART. 78. Both lack of legal character and incompetence must be urged not less than three days before the period for answering the suit.

ART. 79. A question of legal status or character having once been raised, notification will be given for three days to the other litigant, and the incident will be argued through in the same dossier.

ART. 80. If either of the litigants should demand time for evidence, the judge will fix a period, which in no case will exceed ten days.

ART. 81. When the evidence is in, the judge will summon the litigants to a verbal hearing, which will take place within three days, and at which the litigants will adduce such arguments as may serve to establish their rights.

ART. 82. The summons for the hearing produces the effect of a summons for sentence, which the judge will hand down within three days, whether the litigants have or have not attended the hearing.

ART. 83. If time for evidence is not requested, the judge will give his decision after the hearing alone.

ART. 84. If the question of incompetence is raised, it will be argued through in accordance with the provisions of the codes of civil procedure, federal or local, according to circumstances.

ART. 85. Rebuttals involving the essence of the question will be adduced when the suit is answered and will be decided simultaneously with the main issue.

ART. 86. Offset suits and counter suits will only be allowed when the action on which they are based is also subject to summary trial.

ART. 87. The period for evidence on the main issue will be twenty days, extendible for fifteen days more, subject to the judge's discretion, and within that period the flaws of witnesses and instruments may be alleged and proved.

ART. 88. In case either of the litigants takes exception to a document which may be of decisive influence in the litigation, the issue will be followed up in a separate dossier without suspending the procedure; but a definite sentence will not be delivered as to the main issue until an unappealable decision is rendered as to the incidental issue.

ART. 89. If any document is assailed on the score of falsity, the judge trying the case will cause it to be detached from the dossier, leaving a certified copy in its place and will send it to a judge of penal jurisdiction or to a district judge, according to the circumstances of the case, signing it in union with the secretary or the witnesses in attendance, as the case may be.

If the judge trying the main issue possesses mixed jurisdiction (civil and criminal), he will cause the document to be detached from the dossier and will conduct separately the necessary criminal investigation.

ART. 90. In the former case, before the document is forwarded to the competent judge, and in the latter case before the initiation of the criminal action, the party who has presented the document, assailed on the score of falsity, will be asked whether he desires it to be taken into consideration or not. If he insists on availing himself of the document, the suit will be suspended in its then condition until an unappealable sentence be rendered in the matter of the document's falsity. If he does not insist upon said document being taken into consideration, the document in question will be forwarded to the competent judge or will be detached for the institution of the requisite criminal proceedings without causing a suspension of the civil suit.

ART. 91. At the expiration of the period of proof or its extension when granted, the publication of evidence will be at once ordered, the dossier being left open for three days to each of the litigants so that they may make their pleadings in a hearing which will take place at the latest within three days.

ART. 92. At the conclusion of the hearing a citation for sentence will be issued which will be pronounced within the five following days.

ART. 93. The decrees (autos) and sentences pronounced in suits of this nature are only appealable on the basis of indemnification.*

In the case of decrees the appeal must be taken within the unextendible period

* This means that the institution of an appeal does not cause a suspension in the execution of the sentence, but only that the party who won the sentence must indemnify the appellant if in the end the sentence is reversed by a higher court.—*Translator*.

of three days, and in the case of sentences within the period of five days, also unextendible.

CHAPTER XIV.

Procedure for suits of the penal order.

ART. 94. Suits of a penal nature instituted under the present law, if brought before the federal judges in cases wherein they are competent, shall be conducted in the same manner as are other criminal suits until such time as the code of federal procedure in penal cases shall be issued.

ART. 95. When those same suits have to be tried before local judges in the Federal District, States, or Territories, in accordance with article 97 of the constitution and the present law, the procedure shall be such as is at present prescribed by the laws of each of those localities.

ART. 96. A civil suit, arising out of a penal suit, as provided by this law can be carried on at the same time and before the same court as is trying the penal suit; but if the civil suit reaches the sentence stage before the conclusion of the criminal suit, the civil issue will be held over until the criminal suit reaches the same stage, so that both may be adjudicated in one and the same sentence.

ART. 97. If, owing to the fact that the civil issue has not reached the sentence stage, it is impossible to adjudicate it at the same time as the criminal suit, the civil judge that may be chosen by the plaintiff will thenceforth take up and decide the case, unless the judge who has tried the criminal case exercise mixed jurisdiction.

ART. 98. A civil suit must be instituted and carried on separately before the competent tribunal—

I. When an irrevocable sentence has been pronounced in the penal litigation, without civil action having been opportunely instituted in the criminal suit.

II. When the defendant has died before penal action being taken.

III. When the right to take penal action has expired by limitation but civil action has not, as yet, so expired.

ART. 99. When a litigant has instituted action based on civil liability in a criminal suit, the point will be tried according to articles 76 and following.

ART. 100. If the criminal trial is being conducted before a local tribunal the point involving civil liability will be tried as provided by the respective local legislation.

CHAPTER XV.

Concerning publications and the museum.

ART. 101. The patent office will publish a periodical entitled the "Official Gazette of the Patent and Trade-Mark Office," wherein the patents and trade-marks granted and everything concerning them will be published. It will also publish the indexes, memoirs, and other matter connected with the subject.

A public museum will be established to receive models of apparatus, plans, profiles, drawings, specifications, products, and manufactures connected with patents of invention that may be issued.

CHAPTER XVI.

Concerning patents for models and industrial designs.

ART. 102. The following are patentable:

All new forms of an industrial product, piece of machinery, tool, statue, bust, alto or basso rilievo, which, by reason of their novel artistic arrangement, or the novel arrangement of their substance, constitute a new and original industrial product. All new designs used for purposes of industrial ornamentation in any

substance and displayed thereon by printing, painting, embroidery, weaving, stitching, modeling, casting, engraving, mosaic work, incrustation, repoussé, discoloration, or any other mechanical, physical, or chemical means in such manner that they impart to industrial products on which such designs are used an aspect that is peculiar and sui generis, are also patentable.

ART. 103. When a patent is solicited for an industrial model or design a copy or sample must be presented to the patent office, in addition to the documents enumerated in article 9 of this law and those prescribed in the rules of practice thereof.

In case the drawing or drawings representing the design or model for which a patent is sought are difficult of execution, the patent office may accept photogravures or photographs.

It may also dispense with the model or sample when their execution is difficult or costly and the drawings suffice to give an exact and precise idea of the object.

ART. 104. Patents for industrial designs and models will be granted for five or ten years, at the option of the applicant. The above periods are unextendible.

ART. 105. The dues for patents on industrial designs or models are as follows:

I. For five years, \$5.

II. For ten years, \$10.

These dues will be paid in stamps of the federal stamp revenue, in the manner to be provided by the rules of practice.

ART. 106. Patents for industrial designs or models are forfeited at the expiration of the period for which they were granted.

ART. 107. All the provisions governing patents of invention are applicable to patents for industrial models and designs, except the contents of articles 3, 15, 16, 17, and 18.

CHAPTER XVII.

Transient enactments.

ART. 108. This law will go into effect on October 1 of the current year.

ART. 109. Persons who have applied for a patent prior to said date and who have not yet been notified to pay the required dues for the issuance of the title deed will be allowed a period of one month, counted from the date of the coming into operation of the present law, to state to the patent office whether they desire that the patent be issued to them on the basis of the application and documents which they have already presented, or whether they desire to amend both with respect to form so as to adapt them to the new law, in which case they will enjoy another unextendible period of one month, counted from the date of the statement wherein to effect such adaptation.

Any change introduced by an applicant in regard to the essence of his invention, under cover of availing himself of the above right, will cause the annulment of the patent.

ART. 110. If either of the two periods mentioned in the foregoing article expires without the applicant having availed himself of the right for which said periods are respectively conceded, said right will be considered as having been renounced and the patent will be issued on the basis of the application and documents as already presented, however imperfect they may be.

ART. 111. Patents, issued in accordance with the provisions of the two foregoing articles, will be subject, both with respect to the form of their issuance and their legal effects, to the new law, as if the respective applications had been presented after the coming into operation of said law, saving what is provided in the following article:

ART. 112. The legal date of these patents will be:

I. In case the interested parties, making use of the right granted them by article 109, amend their original application, the legal date of the patents will be that

whereon the applicants present their amended applications and documents within the period of two months provided by article 109.

II. In case the interested parties, either expressly or tacitly, fail to make use of the right in question, the date of the patent will be that whereon this law begins to be operative; but when, with respect to two or more patents which are on the same footing, it becomes necessary to determine to which thereof appertains the precedence in point of time, the point will be decided on the basis of the chronological order in which the applications were de facto presented.

ART. 113. Persons who, prior to the coming into operation of this law, have been notified to effect the payment of the respective dues for the issuance of the patent and who have not effected such payment, are allowed an unextendible term of three months, counted from the coming into operation of this law, within which to effect such payment, with the understanding that, if they fail to comply, their applications will be regarded as not having been presented, and the inventions covered by them will be held to have become public property.

The Official Patent Gazette will publish the list of patents to which this refers.

ART. 114. Patents, issued as the result of the payment of the respective dues by the interested parties within the period of time allowed by the foregoing article, will be issued in the form provided by the law of June 7, 1890, and will produce the effects determined by said law and its amendment of May 27, 1896, exactly as if they had been applied for, negotiated, and issued prior to the coming into operation of the present law.

ART. 115. Patents in force at the time of the coming into operation of this law will continue to produce the same effects and will be subject to the same conditions as determined by the law of June 7, 1890, and its amendment of May 27, 1896.

ART. 116. The owner of a patent belonging to the class referred to in the two foregoing articles is entitled to conform to the new law, provided he makes a statement to that effect to the patent office within an unextendible term of six months, counted from the date whereon this law goes into effect.

This conformity must refer solely and exclusively to the future and, therefore, naturally can not imply the right to alter the legal date of the patent or to demand the refunding of what has been paid for dues or taxes in accordance with the law hitherto in force or the obligation of continuing to pay the dues referred to by the amendment of May 27, 1896; for, inasmuch as the effects of the acceptance must apply solely and exclusively to the future, they must naturally comprise not only the prerogatives and rights, but also the obligations and restrictions conveyed by the new law.

ART. 117. From the date whereon this law comes into effect the provision of the first paragraph, article 26, of the code of commerce, will be no longer applicable to the registration of patents of invention in the registry of commerce, and an unextendible term of six months, counted from the same date, is allowed wherein the title deeds of patents, which are registered in accordance with Section XIII, of article 21, of the same code, may be presented for registry in the patent office, with the understanding that, if this is not done, the entries made in said office will be held as preferable to those effected in the registry of commerce, though the latter may be prior in date to the former.

ART. 118. The registrations of industrial models and designs which hitherto have been effected in accordance with the law of November 28, 1889, will continue to produce the effects conceded to them by that law, but the interested parties, who may desire to enjoy the benefits of the present law, can do so, provided that, within the period of one year, counted from the coming into operation of this law, they solicit new registration in accordance with the provisions of this law and renounce the effects of the previous registration.

ART. 119. The registration of industrial models and designs, of which the course is pending at the time when this law comes into force, shall continue to be treated in accordance with the law hitherto in force and the registration shall produce the same effects as they have hitherto produced; but if no opposition is pending, the interested parties may at once conform to the requirements of the new law for this class of registrations and thus they will also at once secure the benefits of said law.

ART. 120. The dossiers of industrial models and designs that may be pending on account of an opposition formulated against them will continue to be treated in accordance with the law of November 28, 1889, until such opposition shall have been definitely disposed of.

If the decision is favorable to the applicants they may make use of the right conveyed by the foregoing article, provided they do so within fifteen days, counted from the date on which they are notified legally of said decision.

ART. 121. The law of June 7, 1890, the amendment of May 27, 1896, and all other enactments issued on the subject are repealed in all their parts.

Section 65, article 9, of the federal stamp law of April 25, 1893, and Section XVII of article 1 of the federal budget law now in force are also repealed.

DEPRECIATED MONEY VALUE IN INDO-CHINA.

(From United States Consul Haynes, Rouen, France.)

Considerable embarrassment is felt and complaints made in France in respect to the present economical and financial crisis in the colony of Indo-China resulting from the depreciation in value of the piaster as compared to the value of gold.

In order not to suffer loss, French firms, in selling to the natives of Tonkin and Anam, are compelled to raise their prices in proportion to the amount of the piaster's depreciation. This would not matter so much if the consumption of the colony were always the same, but, unhappily, when prices advance buying ceases or is greatly checked, and the colonists not only often suffer for necessities but the French manufacturer lacks orders. This is particularly true at present of the cotton industry.

Another difficulty under which Indo-China labors is the constant fluctuation in the value of silver. The French merchant in consigning his goods does not know at what price he can sell them, as between the day the merchandise leaves France and that of its arrival in Indo-China the change can be of such a nature as to upset all calculations and make a promised profitable affair a very unprofitable one. This fluctuation has been complained of for a long time in the colony and in France, and the cry is for a stable monetary system.

The problem is not only economic, but is financial as well, and its solution interests the colonial budget as much as general commerce. The decreasing value of the piaster increases more and more the fiscal charges of the colony, and renders burdensome the heavy

debts which have been contracted to carry on the building of railroads. The obligation to pay the coupons of the loans in gold demands the giving of more and more piasters, consequently increasing the taxpayer's burden.

The present crisis is exactly similar to that through which India passed several years ago. England tried several measures, but on account of the continued depreciating value of the rupee and the obligation to pay in gold the interest on borrowed money, the colony saw its debt annually and ruinously augment. It was only when the English Government established a fixed ratio between gold and the rupee (15 rupees=£1) that the finances of the colony were placed on a firm footing. In April, 1899, the Indian treasury had a gold reserve of £2,000,000 (\$9,730,000), which in 1902 had increased to £7,000,000 (\$34,063,300), without including £1,500,000 (\$7,299,750) deposited in the Bank of England.

The affairs of Indo-China will prosper only when the French Government follows the example of England by fixing a permanent ratio between the value of gold and the piaster.

THORNWELL HAYNES, *Consul*.

ROUEN, FRANCE, *November 18, 1903.*

MERCANTILE FLEET OF JAPAN.

Under date of December 10, 1903, United States Consul S. S. Lyon, of Kobé, Japan, transmits the following extract from the Kobé Journal of December 9:

A number of statistics relative to the development of the Japanese merchant marine have appeared in the Tokyo Keizai. It was in 1870 or thereabouts, the journal recalls, that the Japanese began to turn their attention to the carrying trade, in the modern sense of the term, but its growth was slow until the Chinese war of 1894-95. The following table gives the figures for the eleven years from 1892 to 1902, inclusive:

Year.	Tons.	Year.	Tons.
1892	214,000	1898	648,000
1893	325,000	1899	796,000
1894	320,000	1900	863,000
1895	386,000	1901	917,000
1896	417,000	1902	934,000
1897	486,000		

From the comparative statistics published in the journal, it is seen that, while in 1892 the Japanese mercantile fleet was the thirteenth in the world in point of tonnage, it had risen by 1901 to the eighth position, and it is interesting to note that it is rapidly coming up to the same relative status as that occupied by the Japanese navy, now seventh among the navies of the world. In the same journal

there is an interesting article by Captain Hirayama, I. J. N., director of the Nautical College, in which the writer discusses the relative positions of foreigners and Japanese in the Japanese merchant service. Captain Hirayama expresses the opinion that it is of great importance to Japan that her mercantile marine should be under the command of her own officers. That this truth was early appreciated by Japan was shown by the strenuous efforts made by her to procure a supply of well-educated officers. The growth of the merchant service, however, has been so rapid that the supply of well-trained officers has not kept pace with the demand. According to statistics obtained by Captain Hirayama from the Nippon Yusen Kaisha, and carefully digested by him, the total numbers of officers on that company's European, Australian, American, Bombay, and Shanghai liners was 293, of whom 184 were Japanese and 109 foreigners. On closer examination of the statistics it is found that the higher ranks of the service are almost monopolized by foreign officers, as is shown by the following table:

Officers.	Foreign.	Japanese.
Commanders.....	22	5
Chief engineers.....	21	6
First officers.....	23	4
First engineers.....	13	14
Second officers.....	10	17
Second engineers.....	16	30
Third officers.....	3	46
Third engineers.....	1	62

The Austrian and European lines are all commanded by foreign officers, whereas one steamship on the American and one on the Shanghai line are under Japanese captains, who are graduates of the Nautical College. Of the foreign lines mentioned above, the only one exclusively officered and manned by Japanese is the Bombay service. As for the same company's other foreign lines—namely, those of North China and Vladivostock, as well as the coasting services—they are for the most part officered by Japanese. So also are the ships owned by the Osaka Shosen Kaisha and other companies.

WHEAT GROWING AND MILLING IN MANCHURIA.

(From United States Consul Miller, Niuchwang, China.)

The Chinese Eastern Railway, the southeastern terminus of the great Siberian Railway, in its course through Manchuria to its end at Port Arthur passes through 1,000 miles of as continuously rich agricultural country as can be found anywhere in the world.

THE LIAO VALLEY.

The valley of the Liao River produces and exports \$10,000,000 worth of food products each year. It is a country where crop failures and famine are almost unknown, and where production is as regular and constant as any place dependent on natural rainfall.

The country drained by this river and its tributaries is approximately 62,500 square miles. Some of it is mountainous, but the largest part of it is level land and rich rolling hills, susceptible of

cultivation. Almost every acre through which the railway passes is under cultivation.

Character of the soil.—The soil is mostly a sandy loam, with a slight mixture of clay. Gravel and rock are seldom seen; it is, in fact, a serious problem with the railway to find enough along the line to provide ballast for the road.

The soil is as easily worked as an ash heap and produces enormous crops of beans and millet without apparently diminishing its fertility. Considerable of the land in this valley in Mongolia is in its native state, producing only native grasses as food for ponies, cattle, sheep, and goats. It is owned in large tracts and controlled by Mongol princes. This is a new field for the development of large tracts of land in which the modern steam plow and steam agricultural machinery will find ere long profitable employment.

Already there is talk among the Russians and Chinese about its development. As soon as the more available land is utilized in wheat production there is no doubt but branch lines of the Chinese Eastern Railway will be extended into this country and this land will be utilized in growing wheat. It is too near to the great and growing flour market in China to remain idle long.

The sandy loam deposit, the level land, and the abundance of water a few feet from the surface, together with the general climatic conditions, make a large part of this valley ideal in all of its characteristics for the production of alfalfa. After it has passed the intense period of wheat production which it is now just beginning it will become especially noted for its production of alfalfa, milk, hogs, and beef. The advent of Russia into the valley, with the nature and character of her people, is sure to bring this about.

Principal products.—To-day the Liao Valley is the greatest in the world in the production of beans and millet, but in a very short time it will be great in the production of wheat as well, and then will gradually come the change suggested above.

The very extensive production of beans, used for food, for oil, and for bean-cake fertilizer, throughout this section, makes the port of Niuchwang, at the mouth of the Liao River, the greatest bean market of the world.

Wheat for export.—This entire valley is an excellent wheat-producing country, and the building of modern flour mills and the splendid business they are doing is making such a demand for wheat that its production will be increased as fast as the mills require it. After the Chinese market is provided it may lead to production for export to Europe. This is already being considered and it is possible that wheat exports from Manchuria to Europe may begin within two years, but it is most likely to take place first from the valley of

the Sungari, on account of the greater cost of getting flour from there to the Chinese market.

The Liao River drains the southern section of Manchuria and a portion of Mongolia.

THE SUNGARI VALLEY.

The Sungari River emptying into the Amur is the water way for the northern part of Manchuria and drains a district twice the size of the Liao watershed, but having little if any more first-class agricultural country tributary to it.

Climate.—The latitude is the same as the Dakotas and the climate is very much the same.

Freezing weather begins about the 1st of November and thawing the last of March. The most disagreeable feature of the climate is the strong, severe winds that prevail in winter and spring. The thermometer falls to 45° below zero at times for a very short period.

The natives do not seem to be distressed at this low temperature, but will be found on the roads with their teams at 4 o'clock in the morning hauling the products of their farms sometimes hundreds of miles to market.

The spring and summer are occupied in planting and cultivating the crops, the fall in harvesting, and the winter in hauling to market. Thus the animal and human forces are utilized with the utmost economy. The roads in winter are very good and I am inclined to the opinion that the cheapest cart haul in the world is carried on during the winter in Manchuria.

Character of soil.—The soil of the valley is diversified to some extent, but the most of it is very heavy. Some of the richest sections are now rolling hills of black adobe. Red and brown clay soils are extensive and very productive. There is very little of the sedimentary formation such as composes the most of the Liao Valley.

Principal products.—The kiaoliang, or tall millet, that thrives so well in the Liao Valley is not thrifty in the Sungari Valley. This plant is fast giving way, however, to wheat. Beans, barley, oats, small millet, tobacco, hemp, corn, and vegetables are extensively grown, and large areas of new soil are being brought under cultivation.

Possibilities of wheat production.—The entire valley seems to be especially adapted to the production of wheat and it has always been grown in a small way for local use by the natives. The seed used is the native article, obtained entirely from spring sowing, as there is not enough snow to protect the winter crops.

There are three varieties in general use—a small, plump, white wheat, a longer grain of a darker color, and another larger and longer and still darker but quite thin grain. The introduction of

improved seed will in time, no doubt, improve the quality and quantity of production.

The grain is sown in April and harvested in September and October. It is bound in bundles, hauled to the village and stacked, and thrashed at leisure by the men, women, and children. The grain is laid upon the ground in a circle and stone rollers are pulled over it by donkeys led by children. The straw is raked off and carried away for winter fuel, while the grain is swept into a pile with the chaff and then tossed in the air until the wind separates the grain. The dry, cold winter serves to make this an outdoor occupation for the family, in which men, women, and children take part.

The grain is planted in perfect rows and not sown broadcast or in close drills as in our country. It is cultivated and hoed during the growing season, and weeds are all pulled up and not allowed to grow among the grain. It is claimed that the growing of grain here sowed broadcast is not successful, but this is due no doubt to the very shallow plowing.

The quantity now produced in the best districts is 30 bushels to the acre. I am convinced that this can be increased by improved seed and deeper plowing. Climatic conditions are very constant and regular and the rainy season comes during the growing time without fail, and famines and really bad crops are almost unknown. The production is growing at an enormous rate and keeping pace with the demands of the mills. Even at the present low price wheat is the most profitable crop in northern Manchuria. There are no available statistics to show the area of good wheat lands in the basin of the Sungari; but when the full amount of good wheat land in the valleys of the Liao, the Sungari, the Amur, the Ussuri, and the great plains of Mongolia are taken into consideration it will be a revelation to the world of an enormous country yet to be brought into the production of wheat and flour. The natural market for this will be China, and it is a very important problem with our flour exporters to China to consider whether or not this large increase in wheat and flour production may not soon provide for the entire market of Asia.

The production of wheat and flour is a business with which the Russians are perfectly familiar; and if the railways they now have are extended so as to cover and develop all of the available wheat lands tributary to them, there is little doubt but that one of the greatest wheat-producing districts of the world will be in this part of Asia. The Russian system of railways is being closely followed by a complete banking system, the management of which is carefully studying all the economic conditions of the country and providing the necessary capital for developing such business as its

agents approve. The wheat and flour trade is one of the leading features in their scheme. Russians are coming into Manchuria in large numbers, and all of the elements seem to point in the direction of a great development of wheat production.

Another favorable feature is in the Chinese population, who are mostly immigrants from other parts of China and are therefore not of that conservative class that will oppose new lines of trade and production.

FLOURING MILLS OF MANCHURIA.

Harbin is the present center of the flouring-mill industry of Manchuria and is destined to become one of the great flour-producing centers of the world. It is situated in the heart of the valley of the Sungari, on the banks of that stream, where it has the advantage of water transportation from the wheat fields, as well as transportation by rail from three different directions. It has, in addition to this, cheap water transportation to the sea, two lines of railway reaching the ocean—one at Vladivostock and the other line touching it at Niuchwang, Dalny, and Port Arthur.

In 1900 the place did not contain a single flour mill or produce a pound of flour. In 1901, at the time of my first visit to the place, there was one mill producing 150 barrels a day. In 1902 there were two mills, producing 750 barrels a day. In the early part of 1903 there were six mills, with a daily production of 1,440 barrels. In October, 1903, during my last visit, I found eight mills, with a total daily capacity of 3,800 barrels, erected at a cost of \$618,000. I was informed that two more were in process of construction, and that early in 1904 Harbin will have ten mills in operation, with a daily capacity of 4,600 barrels of flour.

Most of these mills are fine structures of brick and stone, provided with excellent modern machinery from Germany and Austria. Why these mills have not been provided with American machinery I am not advised, but am inclined to the opinion that American manufacturers have neglected to take advantage of previous suggestions to look after the trade. As the construction of mills is likely to continue, it would be a wise plan for our people to give this section some attention.

On the Chinese Eastern Railway, 150 miles south of Harbin, there is a new modern flour mill (the Quan Cheng Tsu mill), producing 150 barrels of flour per day; at Kirin there is another new mill of the same capacity; at Mukden there is a new mill, just started, with a capacity of 100 barrels per day; Port Arthur has a flour mill of recent construction producing 150 barrels per day.

In Manchuria, by the early part of 1904, and within three years, flour mills producing 5,000 barrels of flour a day will have been built, and in my opinion this is only the beginning.

FLOURING MILLS IN SIBERIA.

In South Ussuri district, near the Pacific coast, there are twelve steam flour mills and a number of others operated by water power. The production of these twelve steam mills is 433,344 barrels a year. As there are reports of the construction of several other mills in this section of Siberia, it is most likely that these also are merely the beginnings of greater things to come.

PRICE OF WHEAT.

In 1901 and 1902 the price of wheat delivered at the mills at Harbin was 30 cents gold per bushel. In 1903 the mills paid 42 cents per bushel, and are offering about 37 cents gold per bushel for the wheat of 1903 delivered at the mills. This wheat produces about 75 per cent of flour.

The following tables will show the prices quoted for the various grades of flour and bran at the leading Manchurian mills in 1902 and 1903:

Prices at Harbin mills, per 100 pounds.

Grade.	Price.	
	1902.	1903.
Flour:		
No. 4.....	\$1.00	\$1.32
No. 3.....	1.08	1.40
No. 2.....	1.32	1.55
No. 1.....	2.23	2.46
0	2.40	2.50
00	2.55	2.70
Bran.....	.24	.30

Prices at Quan Ching Tzu mills, f. o. b. cars, per 100 pounds, in 1903.

Flour:	Price.
No. 4.....	\$1. 23
No. 3.....	1. 50
No. 2.....	2. 50
No. 1.....	2. 70
Bran.....	. 40

RAIL AND RIVER TRANSPORTATION.

The railroad rate from Harbin and Quan Ching Tzu to Port Arthur is now 57 cents per 100 pounds, or a fraction over half a cent gold per pound or \$10 gold per ton for a haul between 450 and 600 miles. These rates will no doubt be reduced to meet the future requirements, as it is possible for this railroad to be operated very cheaply. The traffic it can command is enormous and more than a single-track road can possibly handle. The labor cost of operating and maintaining is as cheap as anywhere in the world, and the grades

are few and light, the heaviest being only 9 feet to 1,000, and this only for a very few short distances. Common labor costs only 18 cents per day and skilled labor is about one-fourth the cost of the same labor in the United States.

The next important movement in the flouring-mill business will no doubt be the construction of large mills at Dalny, to be fed with wheat from along the railroad as far north as Harbin.

The Quan Ching Tzu mill is shipping flour now to Port Arthur, but the Harbin mills are shipping mostly to Vladivostock, although they are contemplating the shipment of much of their 1904 output to Port Arthur.

At Vladivostock they have the benefit of a protective tariff against American flour and they are demanding the same at Port Arthur and it is very likely that it may be granted.

The Harbin mills have the advantage of river transportation to the sea. The present rates are 20 cents per 100 pounds from Harbin to the seagoing ships at the mouth of the Amur.

FUEL.

The greatest disadvantage that these mills are laboring under at present is cost of fuel. Wood is used for fuel, and it costs from \$10.30 to \$12.87 per square sagene, or 49 square feet.

The fuel capacity of a square sagene of wood is equal to 3,600 pounds of good English coal or 4,500 pounds of local coal. As coal croppings are to be found generally throughout Manchuria, there is little doubt but that it will soon be developed and take the place of wood at much less cost.

PROFITS.

Under present conditions these mills are making a profit of from 15 to 45 cents for every 100 pounds of grain they grind. Most of these mills are putting all of their profits into enlargements and improvements in their plants.

THE FUTURE FLOUR MARKET.

In my previous reports I suggested that this country offered a better field for the sale of flouring-mill and agricultural machinery than for our flour, and my recent investigations confirm beyond all question my previous views.

The situation here seems to be continually misunderstood, especially by the Pacific coast press, and they refer to the impossibility of Russian competition with our Asiatic flour trade by bringing flour from Odessa, and insist that Russian expansion on the Pacific means an increased demand for our flour in Manchuria. I hope this is true, but a careful examination of every feature of the conditions

leads me to believe that within a year our flour trade in Siberia and Manchuria will be at an end, and within three years flour from Siberia and Manchuria will be pressing hard upon our flour trade in other parts of China.

The saving feature of the situation, however, and one that baffles all predictions concerning the Chinese market for flour, is the increased consumption by the natives.

Foreign flour is being used now wherever the Chinese can afford to pay for it, and, as their wages rise to a plane high enough for the common cooly to buy food made from foreign flour, he becomes a permanent consumer. This expansion in the market is bound to go on for a long time to come and may develop at such a rate as to provide a market for this increased northern Asiatic production as well as our own on the Pacific coast.

Wherever a railroad is built or cheap transportation is provided into the interior the first foreign article carried in is flour. Millions of the Chinese are fed at the street restaurants and foreign flour is easily prepared into the various kinds of food suitable to the Chinese appetite. The question of its consumption is merely the problem of the ability to purchase. At each successive trip into the interior I am astonished at the expansion of the flour market.

CONSUMPTION OF LOW GRADE OF FLOUR.

There is one important feature of this report to which I desire especially to call the attention of our flour exporters, and that is the various grades of flour being produced by the Manchurian mills. It is a subject of common observation that the Chinese use in great quantities very cheap things—of a low grade—and this pertains to their food as much as to anything else. They consume a vast amount of very cheap, coarse, and inferior stuff, such as our people would feed to animals or waste. To provide for all these classes the Manchurian mills make these various grades of flour. The merchant buying the flour can not be deceived as regards these grades, and it would be folly to attempt to impose an inferior article as a high class; but the market will take a vast amount of inferior or low-grade flour at a low price.

Mills here making four grades find that their greatest demand is for third and fourth grade flour.

On account of the large and growing trade of American flour in the Orient I have given this matter much thought and careful study. When this flour begins to reach the sea in quantities it will be met there by largely subsidized steamship lines prepared to carry it to other ports in China at very low rates.

The great advantage, however, lies in the productiveness of the

country, the industrious and cheap labor prepared to produce it, and its nearness to market.

HOW THE PEOPLE LIVE.

The lives of these people are very primitive. The men, women, and children labor in the fields and maintain a cheap, lowly life, living in mud houses and sleeping on mud beds. The entire household furniture and outfit is no greater than could be carried on a single wheelbarrow.

These people are well satisfied to earn from 20 to 30 Mexican cents a day per man, and for women and children much less. Their tools and methods are the simplest and crudest, but they have mental powers sufficient to enable them to learn to handle machinery and better tools with success.

POSSIBILITIES OF PRODUCTION.

Just what the possibilities are in lowering the cost of production by improved seed and better implements I am not prepared to say; but it will at least increase the production and give the people a much improved standard of living at the present price of grain.

Thousands upon thousands of ponies, mules, and carts have been heretofore engaged in hauling the produce hundreds of miles to market, and now that the railroad can do that work these carts can be engaged in carrying the crops to the railway and extending the fields of production into districts heretofore used for grazing only.

During the spring, summer, and autumn these animals are used in planting, cultivating, and harvesting the crops; but in winter they would be idle were they not employed in freighting on the roads. During the winter months the roads are frozen hard and smooth and carting is good. Carts can be hired to haul produce at the rate of \$1.50 Mexican (about 60 cents United States) per ton for 16 miles. This very cheap cart transportation is an important factor in extending the area of wheat production to a great distance from the railway line.

This, with the possibilities of cheap railway transportation, cheap labor, and a productive country, seems to combine all the essential elements for strong and effective competition for American flour in the Chinese markets.

AGRICULTURAL MACHINERY.

Manchuria, Mongolia, and Siberia, as I have continually pointed out, offer a much better future market for flour-mill machinery and agricultural implements than for flour.

The center of this trade will develop about Harbin, and it would be advisable for our manufacturers to look into this prospect. A

permanent agency will have to be established and considerable time given to work up a trade, but it can easily be made to grow into great proportions. In doing this it would be advisable to cultivate relations with the Russo-Chinese Bank, which has branches throughout Manchuria.

The first trade will be in plows and hand cleaners for wheat. These are now being called for; but there are no representatives of American machinery firms in the country, and not even catalogues that can be of use. Catalogues in the Russian language should be sent. In some cases German may be understood, but English catalogues are absolutely worthless.

In order to provide properly for this trade, which I am certain has a big future, a good and shrewd observer should be sent into the country to study the people and their conditions, and implements should be designed to suit these.

The primary factor must be cheapness. For the heavy and sticky soils of the Sungari Valley a stronger and different plow is required than in the sandy loams of the Liao Valley. Stones and roots are almost unknown and the strong, heavy, and expensive plows are not required and could not be sold.

Chinese are contemplating the opening up of large districts of grass lands in Mongolia, near Kuan Chingtsu. Heavier plows will be used for this sod land than for the ordinary farms, and these tracts are of such dimensions that there are possibilities of the use of steam plows and steam machinery.

Catalogues in German, sent to G. Subosisch, Quan Ching Tzu, will be appreciated and used. Proper catalogues for this country should be in Chinese and Russian.

Germany, Denmark, and Austria seem to be pressing for this trade, and although it is much nearer to us we are neglecting it.

OPPORTUNITIES FOR TRADE.

Harbin is a city of 60,000 Russians and 40,000 Chinese. It is the center of Manchurian trade. There are many opportunities to sell American goods, but we have no American citizens there working for trade.

At present Americans are not allowed to own land or build houses, and to do business permission of the local Russian authorities must be secured.

It would not be worth while to enter any of the places along the railway line, or in fact anywhere in Manchuria outside of Niu-chwang, to sell goods against Russian competition, but in agricultural machinery I think Americans would meet with Russian encouragement, rather than opposition.

Russia wants the trade in sugar, cotton goods, kerosene, cigarettes, butter, and many other lines, but it is not prepared to provide for it in agricultural implements.

HENRY B. MILLER, *Consul*.

NIUCHWANG, CHINA, *November 12, 1903.*

LUMBER INDUSTRY OF MANCHURIA AND SIBERIA.*

(From United States Consul Miller, Niuchwang, China.)

There are many lumbering enterprises being established in Manchuria, Siberia, and Sakhalin, preparing to compete with the Pacific coast lumber.

The most important is the Russian Timber and Mining Company of the Far East, with headquarters at Port Arthur. This company is organized by some of the most prominent men connected with the Russian Government, and is reputed to have a capital of 20,000,000 rubles (\$10,300,000). Its principal operations will be on the Yalu River, where it runs down timber from the forests of Korea as well as the large forests of Manchuria.

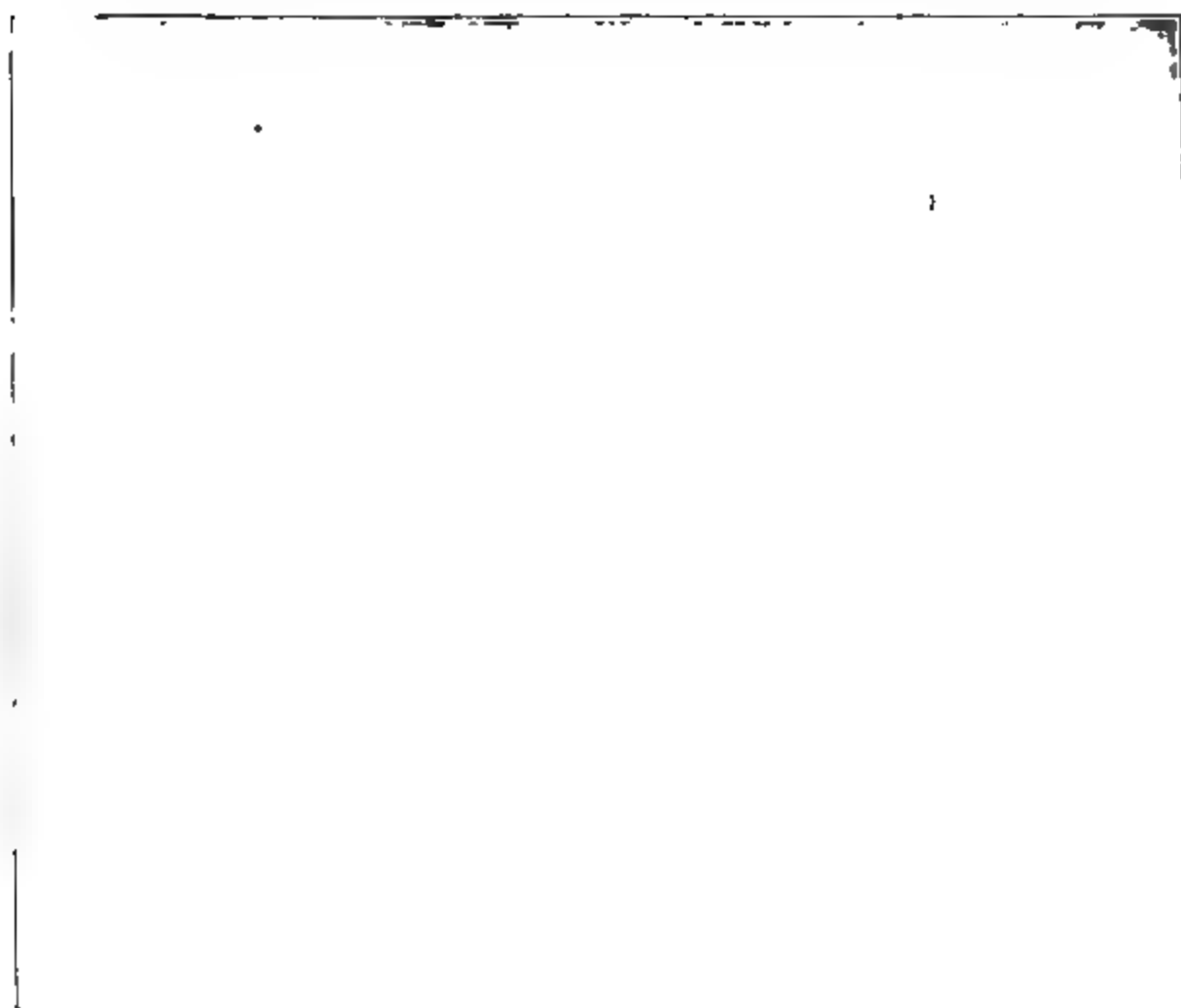
CHARACTER OF THE TIMBER.

I have been informed by men who have seen these forests that they are very extensive and contain immense quantities of exceedingly fine timber. There is much fine timber in this market from that locality, and it has been the source of supply for both this and the Tientsin market for ages.

The ocean and river junks are built of this timber, hewn out in large pieces, often 3 feet and more in width. There are about 25,000 of these junks trading at this port. The timber is mostly pine, very much like the white pine of the United States. This is the best quality of lumber that I have seen in China. The percentage of clear wood is not very large.

There is also considerable fir, usually much smaller than the pine, and also a timber similar to our tamarack. These are the three varieties from the Yalu district that I have seen. It is brought into this market and the other markets of China on junks, a photograph of which is inclosed. These junks, when coming to this market, usually sail in fleets as a means of protection against pirates, who often board them near the mouth of this river and rob them or levy tribute on them.

* This report was prepared in reply to a request from the editor of the Columbia River and Oregon Lumberman, to whom an advance copy has been mailed.



JUNKS BRINGING TIMBER TO NIUCHWANG FROM THE YALU RIVER.

CHINESE SAWMILL IN MANCHURIA.

Most of this timber is driven or rafted down the Yalu in short lengths, and it is almost impossible to get long timbers from this district. The Chinese in their native affairs seldom use any but short timbers, and all the timber cut for Chinese consumption is cut into short lengths in the forests.

METHOD OF MANUFACTURE.

Up to the present the logs from this section have been cut into lumber by the whipsaw method, the natives using a thin and narrow saw blade with teeth set so as to cut both ways. Where the Russians have charge of the native sawmills they have introduced large and heavy saws, cutting only on the downward stroke—such saws as are used in our country for whipsawing lumber. With these the natives accomplish much more.

On the Yalu this old method is now to give way to another; Russia is to construct at the mouth of this river the third largest sawmill in the world. I have not been able to get the details or to ascertain whether the mill is to come from the United States or not, but it is certain that a great mill enterprise is already in process of construction. It is to be situated at one of the points of political controversy. It is at this place that the great naval battle between China and Japan was fought, the conclusion of which practically settled that war.

The establishment of this enterprise is very likely to influence the lumber trade of China to some extent, but more particularly in Manchuria and North China. I am inclined to the opinion that it will not seriously affect the trade in central China.

RUSSIAN LUMBER.

In addition to this competition—which is already supplying large quantities of timber and lumber to Port Arthur, Dalny, and Niu-chwang and to the Chinese Eastern Railway—the Russians are now shipping to all of these places by steamer from Vladivostock and vicinity and the island of Sakhalin large quantities of lumber.

This lumber, so far as I have seen it, is of a rather inferior quality compared with the Yalu lumber; it is harder, coarser grained, warps and twists badly, and is difficult to work. Compared with the Yalu timber it is about like the Norway pine compared with the white pine. It is, in fact, very much like the poor grade of Norway pine. What I have seen may not be the best quality, however. I am informed that the forests of Siberia and Sakhalin Island are quite extensive, and that the lumber production in that section is susceptible of great development.

This information I have from very reliable sources, but I can not

write of it from personal observation. Mr. Clarkson, formerly of Portland, Oreg., has a sawmill and sash and door factory at or near Vladivostock and is reported to be having much success in this enterprise.

Another point of Russian competition in the lumber business is developing on the Sungari River, where the Chinese Eastern Railway crosses it, about 80 miles south of Harbin. Timber in considerable quantities is run down this river to this point and is being made into lumber by the Chinese method, several hundred men being engaged in the work. I am of the opinion that lumber from this source will never reach the sea in competition for the trade of China, but it will be a splendid source of supply for railway use and for the city of Harbin.

This timber, so far as I have been able to find out, is a fair grade of white pine, but the logs are all small. Whether this is due to the difficulties of driving on the stream or to the small growth in the forests, I have not been able to learn.

HARBIN SAWMILLS.

Harbin is to-day only three years old, but it is one of the greatest cities of Asia, and has the largest European population of any Asiatic city, containing 60,000 Russians, besides the soldiers. At Harbin there are two small sawmills cutting timber from the Sungari River coming from below the city. On the railway line between Harbin and Vladivostock there are two large sawmills, the machinery for which cost, in place, 150,000 rubles (\$77,250). These mills are engaged in cutting lumber at present for the railway and for the town of Harbin.

FUTURE OF THE INDUSTRY.

It is clear that Russia intends to provide for all the requirements of lumber in Manchuria and Siberia, with a possibility of entering the Chinese market.

The Government has established a ruling that all railway and Government supplies must be purchased from the Russian companies if possible. This is encouraging many industries in Manchuria, of which the lumber industry is one.

The recent purchase of considerable quantities of lumber from the United States was due to the haste in providing quarters for Russia's army in Manchuria.

The railway will require many ties, or sleepers, as these decay very fast, many having to be replaced before the railroad is completed. This is due to the fact that the railway is not yet ballasted, and the ties are laid deep in the earth and sand, not even the ends being

exposed to the air. These ties are now coming in considerable quantities from Siberia and Japan, and I do not believe it possible for our country to compete for the trade.

The Russians are familiar with the lumber, wheat, and flour business, and as they have the natural advantages and the earnest support of their banks, railways, and Government throughout Manchuria, I am convinced that their development of these industries is likely to soon close this market to our country in these products, and if they show intense energy and enterprise they will become severe competitors in the great markets of China for flour, especially, and possibly for lumber.

There is none of the lumber that I have yet seen equal to the Oregon pine, but much of it is good enough for the common markets of China and will be accepted for most purposes.

I do not know who is furnishing the mill and logging outfits for these Russian companies, but I believe that the machinery companies of the Pacific coast could secure this trade if they made the effort necessary.

The United States commercial agent at Vladivostock is the proper party to address in regard to the Russian Timber and Mining Company, of the Far East, at Port Arthur.

HENRY B. MILLER, *Consul.*

NIUCHWANG, CHINA, *November 4, 1903.*

TRADE AND COMMERCE IN PERSIA.

(From United States Vice-Consul-General Tyler, Teheran, Persia.)

GENERAL TRADE CONDITIONS.

Persian trade, on account of the revision of the customs duty, is in a transition state, a condition in which, like many other problems of life and industry, it is hardly fulfilling justifiable anticipations or producing results equal to the forecast. The influence of the old treaty stipulations is still a factor of considerable importance, while the new system has scarcely had time to prove its efficiency, adequacy, and merit. Time will be required to show the preference of the new order over the old. These contingent forces will, no doubt, in time adjust themselves to the demands of necessity, and it is hoped that the change will ultimately prove the wisdom and foresight of the authors.

EFFECTS OF AD VALOREM DUTIES.

The substitution of specific for the old, indiscriminate ad valorem duty on all articles of trade, both imports and exports, is, for divers reasons, both economically and socially to be preferred; but whether

it will produce an equivalent revenue depends largely upon the capacity for consumption of different classes of the people.

METHODS OF COMMUNICATION.

New and improved means of communication, better methods of doing business, and a diminution of the cost of transport will, to a great extent, neutralize the difference in taxation. The camel, the mule, and the ass, as mediums of transport, are, notwithstanding their picturesqueness, their antiquarian interest, and their conservative instincts, an anachronism and a hindrance to the progress of trade and the development of the natural and manufacturing resources of the country.

Cart roads, so far, can hardly be said to have improved matters, either in expedition, cost, or safety. They have, however, an advantage in providing means for the transport of larger and heavier packages; but the only road that offers these special facilities is the Russian-made road between Resht and Teheran; and this, on account of the excessive transit duties through Russia, is practically prohibitory for merchandise west of that country. This is one reason why nearly all the carriages in Teheran are of Russian make. Such as are of American manufacture have to be imported via Bagdad, which absorbs such an outlay as to place them in the matter of price at a great disadvantage to the Russian article.

The question of railroads, both for international and local trade, is of the utmost importance, being to a large extent the arbiter of the future destiny of Persia.

The new route now open for animal traffic between the Karoon and Ispahan will to a degree mitigate the hardships and expense of the inland transport of goods from the south. The only advantage, exclusive of bounties, which Russian goods have over those of other countries is in the time of transit. There is very little difference, if any, in the cost, and, from my own experience, I can affirm that the wagons now employed on the Resht road make worse time than either camels or mules on the other roads.

BUSINESS METHODS OF PERSIA.

The methods of doing business in Persia have no doubt room for improvement, especially in relation to long credits. The greater proportion of the wholesale trade of Persia is done on credits of two and even three years at 12 per cent interest or more, with the option of the buyer discounting his bills. This is a difficulty of considerable magnitude to the foreign merchant, whose resources of capital and credit are limited and who, in order to keep his transactions up to the requirements of his business, must either borrow

at heavy interest or buy at great disadvantage, either of which will cripple his capacity for preserving the scope of his activity. It is to be hoped that this system will be abandoned sooner or later, wherever and whenever it is possible to do a cash or reasonable credit trade.

The cost of transport is regulated more by the price of forage than by the ordinary cause of supply and demand; consequently in fruitful seasons the expense is greatly diminished. The crops this year have been much above the average, so it may be inferred that transportation costs will be on a more moderate scale.

OPPORTUNITIES FOR TRADE.

American merchants, to compete on favorable terms with English and continental firms, should ascertain how their goods will compare in price and quality on the London market with the same articles of English manufacture. If placed in these respects in the same position there is no reason why they should not meet with an equally favorable reception and realize the same scale of profits.

American goods, when they can be distinguished from those of other nationalities, generally meet with more favor and those who possess them are not slow to boast of the country of their origin.

The qualifications needed to command success in the Persian trade are not different from those required for other countries. A spirit of enterprise, quickness in observing the needs of the market, and decision and energy in supplying the want; penetration to detect the peculiarities of national sentiment and ingenuity in adjusting methods and wares to meet the prevailing tendency or fashion; prudence in regulating operations to the necessities of the time so as not to be led away by appearances, which may be only temporary, or hesitation when promptness will save a situation or carry the market; and above all an intimate experience with the different phases of life and character, manufacture, commerce, and industry, the want of which simple qualifications has brought disaster and disappointment on many promising, useful, and necessary enterprises in Persia and loss and ruin on the promoters. The intellectual qualities of the agent are of more importance than his wares and his business aptitudes than the sphere of his operations.

ADVANTAGE OF PRACTICAL KNOWLEDGE.

Factories supplied with the newest and most efficient machinery and apparatus have been shut up, largely on account of the want in their agents of practical knowledge and discernment of the methods, habits, and general character of the people. Inaugurated under the most auspicious circumstances, with prospects of usefulness and

profit, they continued working for only about three years, although the products they were constructed to supply were in continual demand and far beyond their capacity to put on the market.

Persia at the present time, with the exception of the carpet trade and to a very limited extent printed and plain cotton goods, is without manufactures; consequently the bazaars have to be supplied from without. This means that nearly all the products of the mine and loom are of foreign make and composition. This provides a market of considerable extent for imported goods, which has been, and is even now, monopolized to a great extent by England and Russia. Other countries are represented, but to a much smaller extent. American goods reach Persia through the organized channels of European trade, with foreign labels and trade-marks, the extent of which can not therefore be ascertained.

Within the last twenty years there has been a growing tendency among the general population to use woolen instead of cotton fabrics for ordinary outside wearing apparel. This has caused a large increase in the imports of cloth. Prints, chintzes, and other colored materials are much less used at the present time for men's clothing, and if the quantities imported continue at former figures it indicates either an increase of the population or an improvement in the economical situation.

COMMON SENSE AND CUSTOMS.

It does not appear that American merchants need suffer much in comparison with European traders if they will, so far as they commend themselves to the logic of common sense and the customs and circumstances of the country, adopt their methods and imitate their example. The question of transportation is not, considering freights between America and England, a serious disadvantage, providing there be no great delay in reshipment on the Persian liners. There has been, however, in the past much just cause for complaint on this score. Transshipment at the English ports, for want of proper connections and agencies, has been the cause of much loss in goods and capital as well. American merchants have not yet taken up the Persian trade seriously, and a perfunctory adoption of any line of action rarely or never succeeds.

In choosing printed cotton or silk goods for the Persian market, our own preconceived notions of taste and fashion must be abandoned. Colors which would find no sales with our people are such as meet with the most general approval here. Persians have a naturally refined instinct in the blending and harmonizing of colors, in which they rarely fail to produce a pleasing effect. They have, too, a characteristic aptitude in adjusting them to certain shapes and surroundings. A color and pattern which would appear barbarous

in foreign women's dresses is quite in harmony with the cut and design of Persian wear.

As dry goods form one of the most important of the imports into Persia, it is absolutely necessary for the merchant to make careful observations of the peculiarities, or he soon finds to his cost that his goods are unsalable.

LOCAL CUSTOMS.

Times of feasting and lamentation have to be taken into consideration. The feast of the new year, which begins on the 21st of March and continues for thirteen days, requires each person—man, woman, and child—to put on festal garments of bright and attractive colors. Much self-denial is practiced for some months beforehand in order to save money to meet these extra demands of the family.

On the other hand, one month in the year is set apart as a time of lamentation, and during this period everyone feels under an obligation to be arrayed in black, as the symbol of mourning. Very expensive stuffs for materials in the case of women is not generally required, but such as will last for six weeks or two months is sufficient. With regard to these periodical times of feasting and mourning, it is necessary for those who have to bring their goods from a distance to be careful in the calculation of the time in transit, so they will arrive early enough to meet the demand. It is no unusual occurrence for traders to order their goods with too little margin for mishaps and unforeseen delays in the journey, with the result that they arrive when the occasion which called them forth has passed away.

ADVANTAGE OF CAREFUL PACKING.

Packing, binding, and effectual preservation from wet, and in some cases from the violent heat, are objects which require great attention, for the difference between loss and gain to the merchant often depends upon the quality of the packing. I regret very much to observe that in this respect some of our people have much to learn. A short time ago a case containing twenty circular plates of glass belonging to an electrical instrument was sent from New York, and when it was opened in Teheran nineteen of the number were found to be broken. This in the absence of insurance was a most serious loss, for the plates could not be replaced. Another instance of extremely bad packing was in the case of a most delicate instrument, which was put into a coarse wooden box, with large interstices, and without the least atom of covering or packing material to protect it from the dust, vibrations, and hard joltings which it would suffer on such a long journey. The consequence was that when it arrived in Teheran it was utterly useless. I mention these two certainly rather extreme cases to show the necessity for great care in packing perishable and breakable articles.

All goods liable to be damaged or destroyed by rain or moisture, and such as are of great value and of little compass, should be inclosed in tin or zinc lined cases. A little more expense in the beginning will save a greater loss in the end. With regard to dry goods, which do not suffer from jars and shocks, two points have to be borne in mind—protection from erosion and the effects of wet and moisture by sea and land, both of which are secured by a wrapper of plain, tanned, uncolored skins. All packages should be carefully examined at the port of landing and any necessary repairs, whether small or great, in wrappers or wooden cases, should be carefully made, for the greatest strain and the roughest usage will be encountered on land.

As the camel, the mule, and the ass are still the vehicles of the interior transport of Persia, it will be readily understood that the carrying capacity of each animal is limited, and as the roads are in certain places rather narrow the size of the packages are circumscribed. Camels will carry a burden of 520 pounds, or two packages of 260 pounds each; mules, 326 pounds, or two packages of 163 pounds each; donkeys, 240 pounds, or two packages of 120 pounds each. Packages should not exceed in dimensions 4 feet in length, 2 feet in width, by $1\frac{1}{2}$ feet in depth. These figures include cases and wrappers, and anything exceeding these, either in size or weight, if entered by the south, should come via Bagdad, by which route the topographical difficulties are much less formidable. Packages somewhat heavier than are included in the above figures can be sent via Trebizond, on the Black Sea, whence wheeled carriage is possible via Tabriz to Teheran. Nearly all goods from the continent of Europe, including Constantinople, for Tabriz and Teheran are sent by this route. A proportion from Germany, however, are imported by the south. The time and cost of transport via the Trebizond road varies very little from that by Bushire. The new route from the Karoon to Ispahan and thence to Teheran is on both accounts the most economical; and it should, with careful and enterprising management, attract the greater proportion of the transport of foreign goods from the south for the central and north central districts.

According to a communication received from Messrs. Lynch Brothers, the proprietors of the Karoon-Ispahan road, I find that during the month of August of this year there arrived at the latter city 153 mule and 225 donkey loads of merchandise, and that 92 mules laden and 188 donkeys without loads departed on the return journey.

NOVELTIES DEMANDED.

American lamps, clocks, watches, and locks have a steadily increasing sale in the Teheran bazaars, especially locks, which excel in mechanical complexity, combined with lightness and convenience of handling (important considerations), anything hitherto put on

sale. Phonographs and electric fans are curiosities generally on demand. American hand pumps and cooking and warming stoves find appreciative purchasers and should, with proper management and competitive enterprise, soon monopolize the market. Our exploiters of the trade of Persia should aim at creating demands by the supply of novelties, of which we have a great variety; and by the use of new means and machinery reproduce old lines of goods at less cost than others and, if possible, in more attractive designs and appearance. This could include both vegetable and mineral raw materials. There is no competition from within worth mentioning, except in carpets, which should never be imported; for in the beauty of the dyes, the purity of taste in design, the harmonizing and shading of colors, and the durability in the wear the native article is unapproachable.

Agricultural machinery of a simple, portable make, such as horse-power thrashing machinery, winnowing and chaff-cutting machines, plows, and harrows, will meet with a considerable sale as soon as their utility and advantage over present methods are known. Much more interest is now being evinced in tilling the land and nourishing, harvesting, and thrashing out the crops than was the case in former times. American manufacturers and merchants can, with the vast and diverse sources of supply at their disposal, outstrip any other country in stimulating and meeting Persian demands. Destitution is not appeased by platitudes any more than thirst by the sheen of the mirage; but if some serious steps are taken to bring our goods into direct contact with consumers, with special and distinct marks and patterns, a substantial extension of our trade will take place and Persia will cease from being any longer a terra incognita.

RATES OF TRANSPORTATION.

The following is a comparative statement of the rates of transportation in August on the Bushire-Ispahan and the Ahvaz-Ispahan roads, respectively. Ahvaz is the point of departure from the Karoon River.

Average rates per 13 pounds (2 mans, Persian weight).

Route.	Rate.	Route.	Rate.
Bushire to Ispahan:		Ispahan to Ahvaz:	
Mule transport on merchandise.....	\$0.37	Mule transport.....	\$0.31½
Camel transport on merchandise.....	.34	Transport on opium.....per chest...	2.62½
Donkey transport on merchandise.....	.31	Ispahan to Teheran:	
Ispahan to Bushire:		Mule transport on merchandise.....	.27½
Mule transport on merchandise.....	.17½	Camel transport on merchandise.....	.21
Transport on opium.....per case...	3.00	Donkey transport on merchandise...	.20½
Ahvaz to Ispahan:		Teheran to Ispahan:	
Mule transport on merchandise.....	.31½	Mule transport on merchandise.....	.12½
Donkey transport on merchandise.....	.25	Donkey transport on merchandise...	.10

It will be seen from the above table that the rates of transport for merchandise are much lower toward than from the south, which explains the relative difference between the imports and exports. From some districts this is still more marked, inasmuch as Ispahan is the most extensive area for the cultivation of tobacco and opium, the produce of which is largely exported to foreign markets.

The time occupied in the transport of freight, say, from New York to ports on the Persian Gulf is somewhat uncertain on account of delays which occur in transshipping the goods on to the Persian liners in England. This would be avoided if American ships made the voyage right through to the gulf, which would occupy about nine weeks; that is to say, from London or Cardiff, in Great Britain, the voyage takes, at ordinary times, about seven weeks, with a slight margin for mishaps and unfavorable weather, and it seems that a fortnight would be ample for the Atlantic.

If the freight from London to the Persian Gulf ports (including Mohammerah) is \$5 per ton, from America (including transshipment in England) it would doubtless be about \$8 per ton. This is the only excess and disadvantage which American manufactures have to sustain in competition with English and other continental goods.

All persons, whether commercial or other travelers, are required to have their passports visaed by any embassy, legation, or consulate of Persia, wherever such exists. This is the only formality required for traveling in any part of the country.

American goods have the same privileges and facilities of transportation, storage, and sale in caravansaries, bazaars, warehouses, and stores as those of any other countries, including such as are of local make. The only discrimination or preference shown to one class over another is in the consumer's choice.

RELIGIOUS LAWS REGULATING TRADE.

The old religious laws regulating trade are curious and interesting, but they hardly apply to modern methods and are never invoked except to enforce justice in ordinary transactions. While they give a preference, for religious and ceremonial reasons, to the home or orthodox manufactures over the foreign or alien, they require no indications of nationalities or country of origin on foreign supplies. The only difference in treatment likely to be met with in this respect would be a retaliatory customs imposition in return for similar duties elsewhere.

By the abolition of the 5 per cent export duties on most articles which would be likely to reach the American market, the trade in carpets benefits especially by the change. Silk rugs of the highest quality are now brought within the convenience of a much larger

circle of customers and should increase this branch of our trade considerably. The local prices are lower than a few years ago.

TURQUOIS AND PEARLS.

The turquois gem, the finest examples of which are produced from the mines of Nishapoor, are, probably from some change in the fashion of the west, becoming dearer in price and, in this city and neighborhood, more difficult to find. A word of advice to those whose taste leads them to adopt this article of adornment may not be out of place. Much of the value of the stone depends on its shape, the oblong being considered the most appropriate; on its freedom from spots or discoloration, however small in size; on its age when the color has settled down into its final hue (not the superficial variations or sympathetic changes, but its really permanent shade); but more than all on its actual color, whether fresh from the hands of the lapidary or sedate from long wear. Choice, taste, and fashion largely determine the preference of one shade to another, but the lapis lazuli or the cloudless sapphire of its native skies is the highest quality of the turquois. Price, worth, appreciation, are such strong points of contact with human sentiment and depend upon so many considerations of importance that it will appear to be an exhibition of vanity to venture any opinion on the subject. I have been led to make these remarks in the interest of travelers, who when they come to Persia are generally anxious to possess themselves of one or more of these stones, and they are likely to be deceived unless they have some practical knowledge to guide them.

The pearls of the Persian Gulf, which have formed for a long time past an important branch of the export trade, have likewise, within the last few years, risen greatly in price. I do not think that this means that the supply has seriously diminished, but rather that the demand has increased out of proportion. Ten thousand dollars for a rosary of faultless pearls is not at the present time considered at all excessive, although within my own experience the same could be bought for a tithe of that amount. Like other gems their value depends on so many points of importance that it is impossible in writing to give any instructions on the subject of such delicate discriminations and perceptions of worth.

EXCHANGE OR RELATIVE CURRENCY.

The exchange or relative currency value is always a question of much importance and some difficulty, especially since the silver unit has become so greatly depreciated and the dollar practically unknown in Persia as one of the great elements of commercial life.

Like every other gold standard, its value can be estimated by the English pound, which to a great extent measures and determines the commercial value of the Persian kran. The dollar at the present time, on bills of sight, equals 11 krans. At this rate, in comparison with the pound, there is a trifling loss.

In trading with Persia losses and differences in the exchange can, to a certain extent, be neutralized by a prudent use of exports; but this necessitates an accurate knowledge of the home market and a practical acquaintance with the goods to be purchased.

The choice of exports for the United States markets is small, but from information I have gathered on the subject it appears that the profits are greater than in other countries.

TEHERAN, PERSIA, *October 30, 1903.*

JOHN TYLER,
Vice-Consul-General.

NEW HIGHWAY OF COMMERCE IN PERSIA.

(From United States Vice-Consul-General Tyler, Teheran, Persia.)

The revision of the Persian customs tariff, with the consequent increase of the duty on many of the articles of daily use, renders the questions of improved means of communication, a curtailment of distances, a diminution of time in transit, and a decrease in the cost of transport of paramount importance. Many of the problems of life and industry in Persia hinge largely at the present time on the facilities provided for the circulation of traffic and the reduction of expense, which when made feasible by more expeditious methods and the construction of direct roads, a renewed impulse will be given to the ordinary powers of consumption.

THE CAUCASUS ROUTE.

The prohibitive transit rates imposed by the Russian Government by the Caucasus route on all goods acceptable to Persian trade place the commerce of western nations, whether on this or on the other side of the Atlantic, at a serious disadvantage. It is, however, possible that too much importance has been attached to this circumstance, especially when it is considered that the imports from Russia consist chiefly of sugar and petroleum. By organizing a line of steamers to trade between the Black Sea and the Persian Gulf, facilities are provided for introducing these articles into the south, which has hitherto drawn its supplies from countries farther west. French sugar is generally considered to be of a superior quality to that manufactured in Russia, so the two qualities, taking the original cost and differences of transport into consideration, will compete

on fairly equal terms. It is doubtful whether American oil has hitherto reached the south of Persia in sufficient quantities to attract notice or to suffer to any appreciable extent in the demand.

THE OLD ROUTES.

The old highways from Trebizond on the Black Sea, Bushire on the Persian Gulf, and Bagdad on the Tigris find it increasingly difficult to compete in celerity of delivery with the trade routes of Russia on the northwest, north, and northeast, especially the new cart road, which with admirable engineering skill and a large expenditure of money has been constructed from Resht to Teheran. Although much has been done to facilitate and expedite transport by this road, yet, considering the short distance between the Russian port of Baku and Teheran, rates continue very high and progress inexplicably slow. Experience has, on several occasions, proved that packages dispatched for the legation via the Black Sea and Caucasus have been much longer in transit than if sent by Bushire, although this includes a land journey of about 800 miles, or a distance nearly equal to that between Batum and Teheran, three-fourths of which embrace railway and steamboat transport.

Russian firms and companies, whether as carriers or dispatch and forwarding agents, are greatly lacking in method, precision, and expedition; consequently their own manufactured goods reach their destination much later than the distance justifies or even the most primitive means of transport require. This has provoked dissatisfaction among traders whose business relations are largely with Russia.

THE NEW ROUTE.

An alternative and competing route, which the promoters confidently assert—as will be seen from the translated notice farther on—will both lessen the time and diminish the expenses of transport to a very gratifying extent, has been opened for general traffic between the port of Ahvaz, on the Karoon River in the southwest of Persia, and the great central city of Ispahan, with a continuation by the old road to Teheran.

Messrs. Lynch Brothers, an English firm of great public spirit and enterprise, who have for a long time past been very largely interested in the Bagdad and Arabian trade, about five years ago undertook at their own expense to prepare this road for animal transport with bridges, viaducts, places of rest, and other necessary conveniences for developing and facilitating foreign and local trade. The engineering difficulties in mountainous regions were considerable, but by skill and a liberal expenditure of money these have been overcome, and for ten months in the year caravans pass and repass

with no greater obstacles to contend with than the elements and in some places rather steep gradients. The months of January and February, I am informed, on account of the snow and cold on the passes which have to be crossed en route, should, if possible, be avoided for inland transport.

As much of the utility and success of the road as a mercantile channel of communication must depend upon the capacity, ability, and business aptitude of the local manager, it is very satisfactory to know that Messrs. Lynch Brothers have appointed to this important post Mr. H. Charters, an Englishman of wide experience in oriental methods of transport, great energy of character in pushing forward his business, of natural resource in dealing with native temperament, and well qualified to inspire confidence in those who will use this road as a means to introduce their wares to the markets and bazaars of the interior.

TEHERAN, PERSIA, *October 14, 1903.*

JOHN TYLER,
Vice-Consul-General.

NEW HIGHWAY OF COMMERCE IN PERSIA.

[Inclosure in Vice-Consul-General Tyler's report.]

PUBLIC NOTICE.

3 SALTERS HALL COURT, CANNON STREET,
London, E. C.

Permit us to bring to your notice that we have for some time past opened up a new trade route in the south of Persia from Mohammerah and Ahvaz to Ispahan and Teheran.

Steamship changes.—All direct steamers leaving the English ports, as also the British Indian Steam Navigation Company's vessels from Bombay and Karachi, call at the port of Mohammerah, situated at the junction of the Karun and Tigris rivers below Busrah.

Mohammerah to Ahvaz.—The freight by ocean steamers is the same for Mohammerah as for Bushire. From Mohammerah the merchandise is transported to the Bender-i-Naseri at Ahvaz by our own river service of steamers, at the rate of 13s. 6d. (\$3.25) per ton at weight or cubit measurement for general cargo and 10s. 6d. (\$2.55) for sugar. The journey by our steamers from Mohammerah to Ahvaz occupies only one day.

Ahvaz to Ispahan.—We have constructed a very good caravan road, with suspension steel bridges over the principal rivers, from Ahvaz to Ispahan, a distance of 270 miles. As is well known there is a continuous caravan road from Ispahan to Kom and a wagon road from the latter city to Teheran. The means of communication between Teheran, Ispahan, and the Persian Gulf is much more rapid than formerly and one of the advantages of the Mohammerah-Ahvaz route is the large curtailment of the distance and consequently a great economy of time. The distance between Ahvaz and Ispahan is 270 miles, whereas from Bushire to Ispahan it is no less than 520 miles; and while the distance from Ahvaz to Teheran is 544 miles, it is no less than 800 miles from Bushire to Teheran. The time occupied in making the journey from Ahvaz to Ispahan has been reduced to about fifteen days and may be still further diminished, while the old route from Bushir to Ispahan

via Shiraz can not be made in less than thirty days and we believe that it will generally occupy a longer time on account of the delays at Shiraz caused by such a long land journey.

Cost of pack-animal transport.—The cost of land transport by pack animals such as mules and camels is subject to considerable fluctuations, according to the demands of the season, so that it is absolutely impossible to fix a regular rate; but it may be stated that while merchandise costs, from Bushire to Ispahan, about £10 (\$18.65) a ton, the same by Mohammerah to Ispahan would not be more than £8 (\$38.92). This last cost will very naturally be reduced in proportion as the traffic by this route becomes developed.

Bills of lading.—All the shipping companies take bills of lading from England and the continent of Europe up to Ahvaz. The assurance against risks by land between Ahvaz and Isphan can be easily effected with the English Lloyds. Will take upon ourselves, when so desired to, the necessary forwarding and effect the assurance for every consignment from London to Ispahan or Teheran.

Size and weight of packages.—The size and weight of the packages is a very important factor to be considered in all animal transport in Persia, and the merchandise is liable to great delay when the size or weight is too large. This is no doubt a question which you will bear in mind; and our experience has proved that European dispatch agents and merchants very often deceive themselves as to the quantity or weight which can be transported by mules and camels, resulting in additional expense and unpreventable delays. For mule carriage a bale or a case should never exceed in weight 175 pounds. Oblong cases are to be preferred. It may have a length of 1 yard or even as much as 4 feet, but it should not exceed 2 feet wide by 1½ feet deep. Square cases are very difficult to manage.

For camel carriage the case should not exceed 4 by 2 by 1½ feet. In certain cases the length may be as much as 4½ by 3 by 2 feet, but one of three sides must not exceed 2 feet. The weight of the package should be about 350 pounds, but must never exceed 370 pounds. We can not, however, hope to be able on all occasions to obtain transport by camels.

Be pleased to take notice that we have agents at Mohammerah, Ahvaz, and Ispahan, who, as well as we, will be always very happy to give you further information and advice should you require it.

Pro forma cost account.—We give below a pro forma account in order that you may have an approximate idea of the cost of transport of a ton of merchandise, including certain extra expenses, all payable in London:

Items.	Cost.		
	£	s.	d.
Transport from London to Ahvaz.....	1	13	6
Insurance from London to Teheran, say, on £400.....	1	5	0
Expenses payable at Ahvaz:			
Packing.....	0	8	0
Consular fee for legalizing the agreement with the muleteers.....	0	10	6
Gratuity to muleteers for tea.....	0	2	0
Small expenses, such as telegrams, postage, etc.....	0	5	0
Dispatch commission, 3 krans per load, about 7 loads.....	0	7	0
Expenses at Ispahan—dispatch commission, 2 krans per load.....	0	5	0

Sea transport.—The transport by sea is calculated at the actual cost of £1 (\$4.86) per ton. This estimate is liable to fluctuations.

Insurance.—The premium for insurance only to Ahvaz will be 10s. (\$2.43) instead of 25s. (\$5.97) per cent.

Inland journey.—If goods are consigned to Messrs. Lynch for transport, they will do their best to obtain the most favorable conditions possible for the inland journey; but as the conditions vary greatly it is consequently impossible to formulate them with any degree of exactitude in a pro forma account.

Freight and insurance payment.—Regarding payment, the freight and insurance as far as Ahvaz are both payable in London; the transport from Ahvaz to the destination can be paid by the consignors to our agents, either some time before the arrival of the goods at their destination or before their delivery takes place. In case of valuable packages, a certain proportion of the transport must be paid in advance to Messrs. Lynch Brothers.

TRADE OF ERZERUM, TURKEY.

(From United States Vice-Consul Ojalvo, Erzerum, Turkey.)

In recently published official reports the imports and exports of Erzerum for the year 1902 are given as follows:

IMPORTS.

The imports amounted to \$1,100,705, of which the United States contributed \$7,000 worth of cloth remnants, clocks, locks, rubber shoes, watches, nails, and a buggy; England, \$230,360 worth of coffee, copper, iron, tea, prints, muslin, cloth, and other articles; France, \$141,000 worth of sugar, coffee, leather, silk, silk goods, and luxuries; Russia, \$151,564 worth of petroleum, prints, glassware, carriages, silverware, silk goods, and other articles; Austria, \$30,506 worth of glassware, lamps, oilcloth, paper, etc.; Belgium, \$115,000 worth of iron, nails, window glass, cloth, and hardware; Germany, \$105,060 worth of furniture, silverware, scythes, cloth, prints, silver, lamps, sewing machines, etc.; Italy, \$95,000 worth of drugs, drinks, leather, cloth, etc.; Greece, \$25,000 worth of drinks and a mill machine; Persia, \$200,215 worth of shawls, carpets, rugs, rice, wool, raisins, and copper ware.

EXPORTS.

The exports amounted to \$892,700 and were distributed as follows: Russia, \$95,500 worth, made up of sheep, wheat, furs, etc.; France, \$100,600 worth of linseed, skins, and other articles; Germany, \$10,650 worth of sheep intestines; the balance of \$685,650, exported to Turkish provinces, were made up of dried beef, wheat, cattle, etc.

TRADE CONDITIONS.

For a city like Erzerum, of 42,000 inhabitants, the imports appear very small, especially as it has no industries of its own. The inhabitants of the Province of Erzerum are not consumers of European goods, for only 10,000 look to Europe for their wants and luxuries. The others buy only such things as are indispensable—scythes, sugar, some coffee, tea, iron, and calico. The rest of their

needs are manufactured by themselves, and in such shape that they suit no one but themselves.

Of the \$1,100,705 imports, only \$373,775 worth are imported directly. Of the imports from Europe, leaving out Russia and Persia, only \$22,050 worth, divided as follows, come in direct: Germany, \$4,000; England, \$16,000; Italy, \$2,050. The balance of the imports come from Constantinople and Trebizond.

There are several reasons why the merchants of this city are obliged to place their orders in Constantinople and Trebizond: First, they can not give large enough orders to manufacturers; second, they have no means of sending remittances to European countries. A proposition has been made to the Ottoman Bank at Constantinople for the establishment of a branch here, but it has been rejected on the ground that there is not enough business to maintain it. The third cause is the lack of knowledge of foreign languages.

VITAL OJALVO, *Vice-Consul*.

ERZERUM, TURKEY, *October 17, 1903.*

INCOMPETENT SEAMEN.

(From United States Consul Goding, Newcastle, New South Wales.)

One of the most important factors in the successful management of ships at sea is a crew of competent men. If the master is a reasonable man, supported by well-drilled and competent officers, together with a crew of well-trained seamen, a good vessel can weather almost any storm. At the present time shipowners find great difficulty, in many instances, in obtaining the services of each and all of these men who are qualified for their duties, although many are found in possession of good discharges. This is due, in a great degree, to shipmasters, who frequently give able seamen's discharges to men who have spent but a brief period at sea. Frequently vessels reach this port the entire crew of which had never before seen salt water. They include laborers, doctors, lawyers, parsons, clerks, farmers, and coal miners. It is a fact that many men are shipped in foreign-going sailing vessels whose sea-going experience is of the most limited description.

In years gone by a long period of service was essential to gaining an able seaman's discharge, and such a document could be relied upon as a guaranty that the possessor knew and could perform his work, but in those days men made long voyages and were paid off in the home port after completing a period of service often extending over two or three years. To-day the practice is changed and the sailor, in the majority of cases, makes passages between ports

only. He is either discharged or deserts, becomes stranded in some seaport, and is at the mercy of the crimp and the boarding-house keeper, who handles him as so much personal property. Consequent upon these conditions there is a continual interchange of discharges. The seaman who has been discharged for incompetency, or has deserted and has been ashore for some time, becomes a drug on some boarding-house master's hand. To secure him a vessel, a discharge is procured from a seaman with good credentials, recently paid off, and the incompetent man then goes to sea with a document indicating that he possesses all the necessary qualifications.

When seamen are in demand there is nothing to prevent a shore man from being substituted for a competent sailor, as these men are frequently put on board at the moment of sailing. It is manifest that the shipmaster has no opportunity of testing their ability until it is too late to make an exchange. Shipmasters have informed me that they frequently find it difficult to secure three men out of the crew who could be trusted with the wheel in bad weather or to perform other duties pertaining to able seamanship. To this condition of affairs disaster, loss of property, and sometimes loss of life can be traced. It matters not how staunch a vessel may be, or how well officered, there are times when an incompetent crew may bring about her destruction. By long experience it has been found wise to employ competent sailors as petty officers, but too often a preference is shown for a class of men whose chief qualification is a capacity to handle cargo and drive sailors. The prime cause of this condition of affairs is partly due to unprincipled boarding-house masters, who supply crews to vessels, and partly to masters who give an able seaman's discharge to incompetent men—many times to get rid of them. This last can not be too strongly condemned, as it is both unfair to brother shipmasters and to the public; the first should be inquired into by the authorities.

F. W. GODING, *Consul.*

NEWCASTLE, NEW SOUTH WALES, *July 24, 1903.*

PROPOSED REVISION OF THE SPANISH TARIFF.

(From United States Consul-General Lay, Barcelona, Spain.)

For a long time past the National Labor Bureau (Fomento del Trabajo Nacional), of Barcelona, one of the most active and zealous workers in favor of the development of Spanish trade, has been devoting considerable care and study to the question of the existing treaties of commerce, and the opinion of the leading merchants and manufacturers in every branch of trade has been obtained, so that when the present Government recently called on all the chambers

of commerce and other trade organizations for a statement of their views as to the revision of the commercial treaties now in force with foreign countries the "Nacional" was in possession of a mass of useful information, which it is now proceeding to lay before the Madrid Government, the president of the society having gone to Madrid for the purpose of personally explaining the views of leading commercial and industrial interests in Spanish trade and industry.

The feeling here is strongly protectionist; but whereas prior to the drawing up of the last tariff the desire of the manufacturers of Barcelona was to make the duties such as to virtually exclude as far as possible all foreign products from the Spanish and colonial market, the idea now prevails that if the scheme for providing Barcelona with a free zone is ever to be carried out it will be necessary to modify in some measure these extreme views in the direction of relieving the duties on raw products and increasing them on manufactures, so as to aid the Government in negotiating new treaties of commerce.

A large and representative meeting was recently held at the Fomento to decide upon the reply that was to be given to the Government's inquiry regarding the new treaties, and it was unanimously agreed that it is first of all necessary that the existing tariff be thoroughly revised and reformed in accordance with the present needs of the industries of the nation, a practical experience of the working of the tariff having disclosed many anomalies that ought to be removed before anything is done toward negotiating new treaties, in view of the fact that all such negotiations must necessarily be based upon the tariff in vogue at the time in this country. In the case of several raw products the duty paid is the same as that levied on the manufactured article.

JULIUS G. LAY,
Consul-General.

BARCELONA, SPAIN, *November 9, 1903.*

TARIFF TROUBLES OF AUSTRIA.

(From United States Deputy Consul-General Hanauer, Frankfort, Germany.)

German wine makers are complaining of what they claim to be a discrimination in favor of Italian wines by the Austrian authorities in the construction of the commercial treaty between the two countries, and the German central bureau for the preparation of commercial treaties has recently published a statement on the subject in which the following comment on Austria's action appears:

Austria, when last making a treaty of commerce with Italy, tacitly agreed to allow Italian wines to enter at tariff rates below those which the wines of other countries to whom the most-favored-nation clause had been accorded paid. The

treaty stipulated that the inhabitants residing near the Austrian border should enjoy the privilege of personally bringing in small quantities of wine for their own consumption. (Similar privileges are allowed in many continental countries to inhabitants living near the border. They bring in articles of food—poultry, meat, bread, etc.) By extending this privilege indiscriminately to all shipments of wine from Italy the Austrian Government actually discriminates against other countries with which it has treaties.

The central bureau also declares that Austria has not only favored Italy, but has accorded certain exclusive privileges to Switzerland and Servia which are not enjoyed by Germany and other nations that have the most-favored-nation clause stipulated in their treaties with Austria. The central bureau thinks the German Government should demand guaranties from Austria, when concluding a treaty with the latter, to put an end to the discrimination against Germany. France is also asking Austria to treat French wines as favorably as those of Italy.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, GERMANY, *November 19, 1903.*

PROPOSED REVISION OF THE CANADIAN TARIFF.

(From United States Consul-General Foster, Ottawa, Canada.)

As indicative of the opinion of an influential body of Canadians upon the tariff question, I have the honor to quote a tariff ultimatum issued by the Canadian Manufacturers' Association on the 17th instant:

The Canadian Manufacturers' Association is absolutely nonpolitical. It has declared itself during the past two years in favor of an early and thorough revision of the Canadian tariff. It has advocated such revision—

1. In order that manufacturing in Canada may keep pace with the changed conditions and the needs of the market.

2. In order that capital and labor in Canada may be properly protected from the specialized and heavily protected industries of foreign countries which use the Canadian market as their dumping ground.

3. In order that Canada's resources may be developed and Canadian industries built up.

4. In order that surplus requirements of the Canadian market may be supplied from British rather than foreign sources.

The association does not advocate the adoption of the United States tariff. Some lines of manufacture in Canada may require as much protection as the same lines receive in the United States; many may require less. What we believe to be necessary is a tariff framed from a national standpoint, primarily for Canadian interests and also to build up an increased trade with other parts of the British Empire. Above all, however, it must enable Canadian products to meet the competition of foreign labor on fair and equitable terms.

The association believes that it will be in the true interest of every citizen of the Dominion to revise the tariff, so as to extend to every Canadian industry—mining, fisheries, agriculture, and manufacturing—the same efficient protection against foreign competition.

OTTAWA, CANADA, *December 18, 1903.*

JOHN G. FOSTER,
Consul-General.

FUTURE TREATIES OF COMMERCE.

Revue du Commerce Extérieur, in a recent issue reviewing commercial conditions, says of the present and prospective trade treaties of European countries:

The time is approaching when the international customs régime of central Europe will undergo a complete change. The situation was similar in 1891, when Germany entered the field of politico-economics and made commercial treaties with Austria-Hungary, Switzerland, Belgium, and Italy. In this manner she strengthened her political alliances and became the economic head of Europe, England excepted, as France had been after the adoption of the so-called free exchange in 1860.

The effect of the insertion of the clause in reference to the most favored nation in commercial treaties of central Europe is felt in all Europe. It can be said with reason that Europe has thus a common tariff law as far as the items of merchandise in the treaties is concerned. This observation is a correct one and should have practical consequences. For example, an article named in a tariff attached to a German commercial treaty (say, wine or wheat) is subject to the same tariff regulation in Germany no matter what the country of its origin may be. Our wines will be treated like Italian, Russian, or Swiss wines.

It is unfortunate that France has no part in the preparation of such a tariff. Her products may be benefited, providing they are similar to foreign goods. We have preserved our liberty in the question of this tariff, but at great cost. On the one side we have permitted Germany to lead, and on the other we have ceased to be a contracting party in this great commercial union of central Europe. There only remains the right to participate in the advantages of the tariff. We retain the possibility of gaining a part in this tariff if the powers adopt our minimum tariff. We shall offer the powers this minimum tariff, but, whether accepted or refused, we shall hardly obtain the advantages stipulated in the other commercial treaties. There are, it is true, two exceptions to the rule—the conventions with Italy and Switzerland.

Such is the situation. What will be the future?

On December 31, 1903, the commercial treaties negotiated between the states of central Europe and Russia will expire.

As we participate in the advantages of these treaties, one would think that in negotiating the next treaties the articles named therein would be placed in the general tariff of each country.

In addition to the articles inscribed in the Swiss, Italian, and Russian treaties we have a right to the same reduced tariffs as are applied to the products of the countries bound together by the commercial treaties.

Happily the expiration, on December 31, is only valuable in respect to a condition which was not fulfilled. It was necessary for one of the contracting parties to give notice of the expiration of the treaty before December 21, 1902. As none of

the powers gave such notice, the treaties will remain in force another year. On this point the numerous French houses exporting to the European states having commercial treaties with central Europe can be assured there will be one year without further increase of tariffs. Besides, it is possible that the contracting parties may renounce of their own accord the benefits of the actual tariff and replace them with other tariffs established unanimously, but this is only a theory which may not be realized.

Germany, Switzerland, Austria-Hungary, Russia, and perhaps Italy are ready or almost ready to modify their tariffs. It is not impossible that Germany and Russia will announce this fact January 1, 1904. This will cause serious trouble for our exporters, since in the absence of commercial treaties our products are more exposed than those of the other powers. There are, however, several reasons for doubting the application of the new legislation.

Certain governments have announced their intention to apply their new general tariffs at the same time that their future conventional tariffs go into effect. In this case the rigors of a new commercial régime would be lessened.

Up to the present there is reason to believe that the new tariff changes will be applied simultaneously, but as they have been prepared from the protectionist standpoint international commerce will not be aided much thereby. Certain articles will be benefited, but these will be in the minority, and the increases will exceed the decreases, and, as we have said, the French products will suffer more than those of the signatory powers. This is a very serious state of affairs, and while the public seems disinterested yet the matter is more grave than is supposed.

WOMEN IN THE GERMAN POSTAL, TELEGRAPH, AND TELEPHONE SERVICE.

(From United States Consul Monaghan, Chemnitz, Germany.)

While women were employed in the postal and telegraphic service of France and England as early as 1820 and 1830, Germany did not make a trial of feminine service until 1874. The main circumstance that led to the employment of women at that time was a scarcity of available men. When later the administration of the postal and telegraphic services were combined under one head, a general discharge of the women who had obtained positions in the service followed, largely, so it is reported, because Postmaster-General Stephan, who wielded a determining influence at the time, was irreconcilable in his opposition to the employment of women in the postal and telegraphic service. Hence, all women engaged in the telegraphic service were removed, and only a comparatively small number of those employed in the postal service reluctantly retained as a further experiment. Three years later, in 1876, these also were separated from the service of the Empire.

The successor of Stephan, Postmaster-General Podbielski, was favorably disposed toward the employment of women. He laid considerable weight upon the successful experience with women in foreign countries, especially in the United States. Through his support

and influence women were again introduced into the postal service, though only in limited numbers and purely for the purpose of further trial. The result was quite as satisfactory as had been expected, and since then the number of women in the German postal, telegraphic, and telephonic service has been rapidly increasing, until to-day they comprise an invaluable and indispensable part of the same.

GERMAN WOMEN IN THE POSTAL SERVICE.

In all post-offices of the third class women assistants are appointed by the postmasters of the place, under strict limitations, however, of Government regulations respecting age, character, and education. Such assistants must be of sound health, certified to by a Government medical examiner. They must be entirely free from all deformities, of stainless character, from 18 to 30 years of age, and must possess a good common school education. The highest salary that may be paid to such assistants at third-class post-offices is 500 marks (\$119) per year. In post-offices of the first-class and at railroad post-offices women may be engaged for service as typewriters or similar duties only. All women assistants have the character of Government officials (*Beamteneigenschaft*), which means that on their withdrawal from the service after faithful, competent work during a prescribed number of years they have a claim to a pension (*Ruhegehalt*), under the law of the Empire, if their circumstances are adjudged such as to require it.

GERMAN WOMEN IN THE TELEGRAPHIC SERVICE.

Instead of being qualified to occupy only a certain class of specified positions, as was found to be the case in the German postal service, women are privileged to take any positions whatever in the telegraphic service, subject at all times to the above-enumerated regulations respecting age, character, and education. They have a similar claim to a pension as those engaged in the postal service and in all respects are similarly employed, privileged, and discharged.

GERMAN WOMEN IN THE TELEPHONIC SERVICE.

At the present time, 4,000 women are employed in the telephone service of the German Empire. In Berlin alone 1,000 women are engaged. These positions are so popular and the number of applications is so large that the number of accepted and qualified women whose names have been registered in the order in which they were considered is so large as to supply occupants for any possible vacancies that may result in the course of the next few years. Only physically strong girls are admitted to the service. They must possess a

good character and be of respectable families. They must be between 18 and 30 years of age and either unmarried girls or widows without children.

EDUCATIONAL QUALIFICATIONS.

Every applicant must possess an education equivalent to graduation from an elementary school (Elementarschule). In making the application for a position it is necessary to produce a birth certificate, school certificate, certificate of conduct (Leumundszeugnis), in which are registered all praise or dissatisfaction expressed by previous employers of the person in question, and a brief biography. The latter must have been written and constructed solely by the applicant. The written consent of the father or guardian is also necessary. Some time after the application, accompanied by all the required papers, has been filed notice is sent to the applicant to appear for an examination, which embraces questions of arithmetic, German, and geography. The examination in German consists of a short essay on some familiar subject. In geography, the test places most emphasis on the political divisions of the German Empire and knowledge concerning the most important cities of foreign countries. The test in arithmetic covers in the main the four fundamentals, interest, and partnership. After successfully passing the examination the applicant is sent to an official medical examiner, who must certify as to her physical and nervous soundness, and especially as to the condition of her lungs and nerves.

PRACTICAL PREPARATION AND ADVANCEMENT.

Having successfully acquitted herself in all the foregoing tests, the applicant is now ready to begin a period of practical preparation. This work as an apprentice covers from three to four weeks, and during the time the learner receives no salary. Having satisfactorily completed her period of practical study, the applicant is ready to enter upon a regularly paid position. Since, as was already stated, the number of applicants is always extremely large, a number of months or even a year or two may pass before a vacancy occurs.

A position being open, the applicant can not enter upon the same if she has in any way, in the meantime, spoiled her record or failed to preserve a stainless character. She must also, at the time of her employment, be living with her parents, or in some other respectable place free from all question.

The daily hours of employment vary from six to eight; sometimes Sunday work is required. The employee must, immediately after being engaged, begin her contributions to the sick fund (Krankenkasse beitreten), and in case she succumbs to sickness or injury she continues to draw three-fourths of her regular salary and receives

free medical treatment. Her pay to begin with is 2.25 marks (53.5 cents) per day. After two years of satisfactory service this is raised to 2.50 marks (59.5 cents) per day. After two additional years—that is, after having been four years in the service—her pay is raised to 3 marks (71.4 cents). If after service for several more years the girl has shown herself capable and unusually diligent, she may be appointed as supervisor (Aufsichtsdame), with an annual increase in pay of 100 marks (\$23.80).

After ten years of faithful service another advantage is added in the form of appointment with full claim to a pension (Anstellung mit Pensionsberechtigung). After being thus engaged, her salary amounts to 1,100 marks (\$261.80). This salary is then increased every three years by the amount of 100 marks (\$23.80) until it amounts to 1,500 marks (\$357). This is the highest salary that a woman can draw in the German telephonic service. It is sufficient to insure a comfortable existence to the employee, though to an American the amount may seem somewhat small, even for an exceedingly plain living. It must be remembered that the German women living in Germany who belong to this class of wage-earners can live with considerably less expense and with much greater comfort than would be possible in the United States.

In England the salaries of positions of this kind are much better paid. Girls are admitted to the service at 15 years of age. During the first years, while they are “girl clerks,” they receive from 800 to 900 marks (\$190.40 to \$214.20). When they receive a permanent position as “women clerks” their salary is increased to 1,100 to 1,200 marks (\$261.80 to \$285.60). After twelve years of faithful service they receive the considerable salary of 2,400 to 2,500 marks (\$571.20 to \$595). The best women are even appointed to positions as chief supervisors or assistants in first-class offices, with a salary of 10,000 marks (\$2,380).

J. F. MONAGHAN, *Consul*.

CHEMNITZ, GERMANY, *December 10, 1903*.

WAGES AND COST OF LIVING IN GERMANY.

(From United States Consul Harris, Mannheim, Germany.)

WAGES.

The general business depression has affected the rate of wages paid, and yet there have been fewer reductions than might have been expected. This has doubtless been due in part to the influence of labor organizations and in part to the recognition by manufacturers that wages have been for some time as low as the cost of living will permit. The loss from an economic standpoint of an improperly housed and fed working class is frequently referred to

by manufacturers themselves and has, doubtless, had its effect in sustaining wages during the depression.

During a strike in the month of August among the employees of a large firm of Mannheim engaged in the manufacture of agricultural implements and traction engines, a detailed statement was published by the firm showing the rate of wages paid different classes of their workmen during the first six months of the current year. On the part of the firm it was claimed that the rate was as high as, or a little higher than, that generally paid in this locality for the same class of labor.

A summary of the wages paid the somewhat more than 100 blacksmiths employed in one of the two plants operated by the firm shows that 31.79 per cent of the 100 received, per day of nine and one-half hours, 71.4 to 95.2 cents; 45.05 per cent, 95 cents to \$1.31; and 23.16 per cent, more than \$1.19.

These figures do not include boys, apprentices, or foremen. Of the 121 blacksmiths employed at the plant at the second pay day in June, 45 men were reported as receiving from 3 to 4 marks (71.4 to 95.2 cents), 38 men from 4 to 5 marks (95.2 cents to \$1.19), 26 men from 5 to 6 marks (\$1.19 to \$1.43), and 12 men from 6 to 7 marks (\$1.43 to \$1.64) per day.

The following table shows the published rate of wages paid workmen in the various departments of this manufacturing concern during the successive semimonthly pay days from January 1 to June 30, 1903. In this table are reckoned machinists, blacksmiths, boiler makers, and other mechanics, as well as helpers and day-laborers. Boys, apprentices, and foremen are not included. The wages stated are for a day of nine and one-half hours.

Statement showing the daily wages paid to each workman in each class and the number of workmen in each class on twelve semimonthly pay days.

Pay day.	Number of workmen receiving—						Total number of workmen.
	71.4 to 95 cents.	95 cents to \$1.19.	\$1.19 to \$1.43.	\$1.43 to \$1.67	\$1.67 to \$1.90.	Above \$1.90.	
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
First.....	559	581	432	77	8	.....	1,657
Second.....	440	720	479	74	1	1	1,715
Third.....	444	841	526	81	1	.....	1,794
Fourth.....	461	782	541	93	3	.....	1,880
Fifth.....	472	761	562	104	4	.....	1,903
Sixth.....	463	767	644	104	5	1	1,984
Seventh.....	456	798	624	140	9	1	2,028
Eighth.....	472	839	607	140	7	1	2,066
Ninth.....	481	820	613	130	8	1	2,053
Tenth.....	493	823	620	144	8	1	2,080
Eleventh.....	499	774	641	159	8	1	2,082
Twelfth.....	517	791	638	153	8	.....	2,107

A summary of the foregoing table shows that 24.65 per cent of the employees received from 71.4 to 95 cents, 58.86 per cent 95 cents to \$1.31, and 16.49 per cent above \$1.31 per diem.

The wages paid by the wood-pulp and paper mill of this city, one of the largest and best-managed concerns of its kind in Germany, employing more than 1,700 workmen, the larger part of whom would be classed as unskilled, were as follows: In 1889, 57 cents per day; in 1902, 75 cents per day. The skilled or partly skilled workmen received in 1889 an average of 78½ cents per day and in 1902 \$1.02 per day.

COST OF LIVING.

Closely related to the question of wages is that of the cost of living. This has shown a tendency to increase and is a matter of grave concern to the manufacturer in this locality, seeing as he does that the burden indirectly falls upon himself. Competition is forcing down the selling price of his wares while the cost of living tends to keep up the rate of wages.

The matter is recognized as one of wide economic importance in this manufacturing center. It is pointed out that the increase in the price of meats, for example, is reducing its consumption among the working classes and is bringing the nation face to face with the question of the proper nourishment of these classes. It is noted that in 1901 22,582 tons of hog and other casings were imported into the Empire for use in the manufacture of sausages, indicating to what extent the working classes especially are dependent upon the cheaper meat products. Special stress is placed on the injury to the working classes resulting from the forced reduction in the use of pork.

An analysis of consumption statistics shows a falling off in the per capita consumption of good meats in Mannheim and an increase of the relative amount of the cheaper-priced meats used. Thus, for example, the number of horses slaughtered for food in the city was 404 in 1900, while in 1902 the number was 554.

H. W. HARRIS, *Consul.*

MANNHEIM, GERMANY, *November 25, 1903.*

LONDON AND PARIS CAB COMPANIES AND CABMEN.

(*From United States Consul Halstead, Birmingham, England.*)

LONDON.

There is much discussion of the "situation in the cab trade" in London newspapers, and some points from that discussion should be of interest to the "trade" in the United States. In a letter to the London Times the secretary and general manager of the London

Improved Cab Company makes the assertion that in no trade are the employer and the employed more thoroughly identified than in the cab trade of London, in which "the latter has had a better share of the profits, with no risk of the losses." Since the 1890 arbitration award he says that the distribution to the shareholders of his company has been an average of $6\frac{1}{4}$ per cent, which is at the rate of 8d. (16 cents) per cab per day, and, though he does not give the figures, he claims that the sums reserved for depreciation and contingencies have not been greater than necessary, and that these dividends have only been achieved by the company's ability to buy fodder, etc., on the best wholesale terms, by manufacturing their own vehicles, harness, etc., and by taking a share in livery work other than the cab trade, which is of a more profitable character. A very large proportion of the small proprietors have gone out of the trade and sold their stock, generally to cab drivers who saved sufficient money to own their own vehicles and horses, which indicates how the "Asquith award" has worked with those living "from hand to mouth." In comparison with the lot of other workers in many walks of life, a cab driver, out in all weathers—hot, cold, and wet—is a very visible candidate for sympathy, and is habitually the recipient of more than his due. He is out some twelve or thirteen hours a day, as omnibus drivers and conductors have to be; but the last named, who get no sympathy, practical or other, do not enjoy nearly as much leisure during their hours of work, and their earnings average less.

The company hires to cabmen a hansom cab with two horses daily for from 10s. to 12s. (\$2.43 to \$2.92), according to dates when probable earnings are high or low, and a cabman is not liable to take out his cab when indisposed for work. The cab company is liable for accidents, loss of luggage, and all contingences. The company also pays rent and taxes, buys food and "litter," and pays for the cleaning and washing of the cabs, "while with the most economical working the outcome is a divisional profit of 8d. (16 cents) per cab per day." The secretary says that a "driver on the 12s. 3d. (\$2.98) basis, during the eight completed years since the Asquith award, working on the average two hundred and eighty-two days a year, has earned the average profit of 11s. 7d. (\$2.82) per day for himself—these figures having been furnished by an employee of the company who kept a diary, and there is nothing exceptional as to the quality of the man and his work."

PARIS.

Another writer of a card to the editor asks why London cabmen do not "seek salvation" where a large number of Paris cabmen have found it long since—that is, in cooperation. This writer says that

there are in Paris something like 1,000 cooperative cabs plying, supplied by 16 or 18 cooperative cab yards, which are now in a flourishing condition, some of them very large and substantial undertakings.

The men in this service net on the average something like a half crown (61 cents) above the outside cabman's rate of compensation, and they are absolutely independent, are their own employers, and the horses, cabs, and the more pretentious carriages, with stables, sheds, harness, etc., are all theirs. It is true, badly managed cab societies have ended in insolvency, but the cab societies which have survived are all the stronger and are so well off in regard to capital that they can admit respectable new members without demanding any substantial installment on their shares, the new members paying for their shares out of their earnings.

MARSHAL HALSTEAD, *Consul*.

BIRMINGHAM, ENGLAND, *December 8, 1903.*

WAGES IN SPAIN.

(From United States Consul-General Lay, Barcelona, Spain.)

A comparative statement appeared recently showing the difference between the rate of wages paid to the laboring classes and the cost of living in the years 1827, 1868, and 1902.

In 1827 the average daily wage earned by a skilled artisan was not more than 2.75 pesetas* (53 cents) and that of an unskilled laborer 1.75 to 2 pesetas (34 to 38.6 cents). In the year 1868 the scale of wages still remained about the same. In 1902, however, the average had risen to between 3 and 3.50 pesetas (45 and 52.5 cents).

Taking into account the approximate number of hands employed at the different dates we find that the average daily wage was:

Year.	Wages.	
	<i>Pesetas.</i>	<i>Cents.</i>
1827	2.75	53
1868	3.00	57.9
1902	3.25	48.7

These figures show that in the space of seventy-five years wages rose about 15 per cent.†

* The value of the peseta in 1827 and 1868 was 19.3 cents, while its value in 1902 was only 15 cents.

† Taking the peseta regardless of its depreciated value, this percentage of increase is correct; but taking it at its present real value (15 cents) the wage rate in 1902 was actually less than in 1868 and 1827.

On the other hand, the following table will show how the prices of certain articles of food have increased during the same period:

Article.	1827.	1868.	1902.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Bread.....per kilogram...	4.8	6.7	6.2
Meat.....do.....	13.5	28.9	37.7
Bacon.....do.....	20.2	33.7	30
Chick-pease.....do.....	5.8	8.7	9
Rice .....do.....	9.6	11.58	10.5
Wine .....per quart...	5.8	6.75	6
Oil.....do.....	11.6	19.3	16.5

It should be noted that the values given for the year 1902 are for the lowest qualities, whereas in the case of other years they refer to the average cost; thus we see that during the seventy-five years the cost of these necessities of life has vastly increased, and that, in reality, the position of the laboring classes has become worse—the purchasing power of the silver peseta having steadily declined. It is this fact that lies at the root of the perpetual labor troubles in this country.

JULIUS G. LAY,
Consul-General.

BARCELONA, SPAIN, *October 23, 1903.*

PRIVATE INCOMES AND FORTUNES IN FRANCE.

(From United States Commercial Agent Griffin, Limoges, France.)

Few people are better known for their thrift and economy than are the French; hence figures dealing with their incomes and private fortunes are interesting. Mr. Yves Guyot has shown recently that there is no direct-income tax in France, as that word is understood in the United States.* There is a direct tax on realty and a fixed capitation tax. This latter takes the place of the income tax of other countries. A person's taxable wealth is never really known till death takes it into the courts for the division and settlement of his estate. Even then there is doubt, due to the fact that many persons, to avoid the tax on property distributed at death, divide it up among the members of their families in anticipation of death. This is the rule in regard to wealth consisting of bonds and railroad securities, particularly if all the parties interested are in accord. Thus the real figures are never made public. Mr. Guyot thinks

* It is now proposed to abolish the present system of taxation and to replace it by a tax on incomes and on the amount paid for house rent.

that fortunes change hands in every generation of thirty-five years; hence estimates may be made in periods of thirty-five years, allowance being made for changes in value, life-insurance policies, etc. The assessed value is based upon article 15 of the law of Frimaire, Anno VII (November–December, 1799). Twenty-five per cent is added to the assessed value of rural real estate and 20 per cent to other realty. The product of the land and the price of leases are not changed. A farm rented for 4,000 francs (\$772) is valued at 100,000 francs (\$19,300); a house renting for 4,000 francs (\$772) is estimated at 80,000 francs (\$15,440). In southern and central France, where leases are rarer than in the Departments not given to the cultivation of the vine, the legal method of making estimates may be followed. In the other Departments a relative decline in valuation of property has been recorded. In 1899 the property affected by death in France was:

Description.	Value.	
	<i>Francs.</i>	
Rural real estate.....	1,454,000,000	\$280,622,000
City real estate.....	1,588,000,000	306,484,000
Personal property.....	2,202,000,000	424,986,000
Chattels.....	1,521,000,000	293,553,000
Total.....	6,765,000,000	1,305,645,000

On this total the ratio between personal and real estate is as 85 to 100. The wealth possessed by the French people in foreign parts, at least as far as such appears in the records of taxes on legacies for 1898 and 1899, was 579,368,000 francs (\$111,818,024), divided among 2,202,000 cases. To arrive at a fair estimate of inherited annuities in France one will have to account for the transfers anticipatory of death. The valuation of these transfers on which taxes have been assessed was:

Year.	Value.	
	<i>Francs.</i>	
1899	984,000,000	\$189,912,000
1900	1,018,778,000	196,624,154
1901	1,041,299,000	200,970,707

If to these last figures be added the 5,441,000,000 francs (\$1,050,-113,300) upon which the inheritance tax was paid, the total is 6,482,000,000 francs (\$1,251,026,000), which, multiplied by 35, gives 227,000,000,000 francs (\$43,811,000,000) as a basis for estimates. By the law of 1899 no notice was taken of debts in taxing estates.

By the law of 1901 they are deducted, thus changing the gross assets of that year from 5,211,000,000 francs (\$1,005,723,000) to 4,772,000,000 francs (\$920,996,000). The number of estates does not give the actual number of landowners. By the census of 1851-1853 there were 12,445,600 parcels of land and 7,845,700 owners, or 63 per cent; by the enumeration of 1887-1893, the pieces of property without buildings were 14,234,000 and the number of owners 8,454,000, divided as follows: Per 1,000 inhabitants, 234; per 1,000 households, 849; per 1,000 estates, 594. This shows the proportion of proprietors to the parcels of lands without buildings to be 60 per cent.

According to the records of the direct-tax office, there were 6,453,000 inscriptions of proprietors of land with buildings. Proprietors often have parcels of land in different parts of the country and buildings in several places, hence it is very hard to get the actual number of proprietors or landowners. The estimates at the office of direct taxes give 17.25 per cent of the people as proprietors of land without buildings. Mr. Neymarck says 68 per cent of 520,961 railroad shares are in the hands of parties owning less than 25 shares each. Each bond stands for from 460 francs (\$88.78) to 11,040 francs (\$2,130.20).

The revenue from the real and personal estates of the nation is put down at 8,000,000,000 francs (\$1,544,000,000). Taking these figures as a base, the net revenue on the capital is a little more than 200 francs (\$38.60) per capita or 800 francs (\$154.40) per family, which for France is estimated at four persons.

W. T. GRIFFIN,

LIMOGES, FRANCE, *October 22, 1903.*

Commercial Agent.

INCOMES AND INCOME TAXES IN SAXONY.

(From United States Consul Monaghan, Chemnitz, Germany.)

The total taxable incomes of the people of Saxony for the year 1902 was 2,286,720,350 marks (\$544,239,443), as against 2,263,380,172 marks (\$538,684,481) for the preceding year, showing an increase of 23,340,178 marks (\$5,554,962) for the year 1902, the smallest that has been recorded for many years. In 1901 the total taxable incomes aggregated 59,300,000 marks (\$14,113,400) over the amount of the year 1900. The annual increase from 1896 to 1900 was more than 100,000,000 marks (\$23,800,000). Here we find a forceful illustration of the continuing industrial depression. Closed factories, decreased dividends, lack of employment, half salaries, etc.—these are the unmistakable proofs of trade lethargy.

The sources of these incomes and their comparative importance is shown in the following table:

Class of income.	Amount of income.	
	Marks.	
Real estate.....	343,469,765	\$81,745,805
Rents.....	300,411,795	71,498,007
Salaries and wages.....	1,157,745,376	275,543,399
Trade and industry.....	700,124,225	166,629,565
Total incomes.....	2,501,751,161	595,416,776
Government reduction of interest on debts.....	215,030,811	51,177,333
Total taxable incomes.....	2,286,720,350	544,239,443

The annual income tax paid upon this amount in 1902 was 36,-461,389 marks (\$8,677,810), plus a special tax of 25 per cent of the amount already paid under the fixed Government schedules, making the total income tax for the Saxon Government for the year 1902 45,576,736 marks (\$10,847,263).

The total number of persons with registered incomes was 1,785,-471. Of these, 188,770 were exempt from the income tax on the ground of having incomes of less than 400 marks (\$95.20) per year. Saxony, therefore, had 1,596,701 persons with taxable incomes in the year 1902. The distribution of incomes was as follows:

Persons paying tax.	Amount of income.	
	Marks.	
Number.		
984,308	400 to 800	\$95.20 to \$190.40
565,193	801 to 1,600	190.64 to 380.80
162,084	1,601 to 3,400	381.04 to 809.20
29,811	3,401 to 4,800	809.44 to 1,142.40
28,311	4,801 to 10,000	1,142.64 to 2,380.00
14,052	10,001 to 50,000	2,380.24 to 11,900.00
1,150	50,001 to 100,000	11,900.24 to 23,800.00
560	Over 100,000	Over 23,800.00

The above figures of the number of persons include not only physical persons, but corporate bodies or judicial persons as well. In all classes of incomes up to 100,000 marks (\$23,800) the number of persons drawing such incomes increased since the year 1900, while in case of those persons or corporate bodies drawing an income of over \$100,000 marks (\$23,800) the number, which in 1900 was 583, decreased by 21 in the two following years. Here we have another symptom of unfavorable trade and industrial conditions. The highest income enjoyed by any person in Saxony in 1902 was 875,320

marks (\$208,326) and the highest income of a corporate body was 5,253,000 marks (\$1,250,214).

Under the law of July 24, 1900, a progressive income tax is now in operation, the classification of incomes and the amounts paid being as follows:

Class—	Amount of income.	Amount of tax.	Class—	Amount of income.	Amount of tax.
12	\$95.20 to \$119.00	\$0.238	23	\$1,612.40 to \$1,737.40	\$46.41
1	119.00 to 142.80	.476	24	1,737.40 to 1,856.40	50.456
2	142.80 to 166.60	.714	25	1,856.40 to 1,975.40	54.502
3	166.60 to 190.40	.952	26	1,975.40 to 2,094.40	58.548
4	190.40 to 226.10	1.428	27	2,094.40 to 2,237.20	62.832
5	226.10 to 261.80	1.904	28	2,237.20 to 2,380.00	67.116
6	261.80 to 297.50	2.38	29	2,380.00 to 2,618.00	71.40
7	297.50 to 333.20	3.094	30	2,618.00 to 2,856.00	78.54
8	333.20 to 380.80	3.808	31	2,856.00 to 3,094.00	85.68
9	380.80 to 452.20	4.998	32	3,094.00 to 3,332.00	92.82
10	452.20 to 523.60	6.902	33	3,332.00 to 3,570.00	99.96
11	523.60 to 595.00	8.806	34	3,570.00 to 3,808.00	107.10
12	595.00 to 666.40	10.71	35	3,808.00 to 4,046.00	114.24
13	666.40 to 737.80	12.852	36	4,046.00 to 4,284.00	121.38
14	737.80 to 809.20	14.994	37	4,284.00 to 4,522.00	128.52
15	809.20 to 880.60	17.136	38	4,522.00 to 4,760.00	135.66
16	880.60 to 952.00	19.516	39	4,760.00 to 4,998.00	142.80
17	952.00 to 1,023.40	22.848	40	4,998.00 to 5,236.00	149.94
18	1,023.40 to 1,142.40	26.656	41	5,236.00 to 5,474.00	157.08
19	1,142.40 to 1,261.40	30.464	42	5,474.00 to 5,712.00	164.22
20	1,261.40 to 1,380.40	34.272	43	5,712.00 to 5,950.00	171.36
21	1,380.40 to 1,499.40	38.318	44	5,950.00 to 6,188.00	180.88
22	1,499.40 to 1,618.40	42.364	45	6,188.00 to 6,426.00	190.40

Up to an income of 100,000 marks (\$23,800) the classes continue to rise for every additional increase in income of 1,000 marks (\$238), and for incomes over 100,000 marks (\$23,800) classes rise for every increase in income of 2,000 marks (\$476). The tax increases 30 marks (\$7.14) for each class for incomes between 10,000 and 25,000 marks (\$2,380 and \$5,950); 40 marks (\$9.52) for incomes in classes between 25,000 and 77,000 marks (\$5,950 and \$18,326); and 50 marks (\$11.90) for incomes in classes between 77,000 and 100,000 marks (\$18,326 and \$23,800). For incomes above 100,000 marks (\$23,800) the tax is 4 per cent of the highest income in the last preceding class.

J. F. MONAGHAN, *Consul.*

CHEMNITZ, GERMANY, *October 2, 1903.*

DEVELOPMENT OF THE STEAM TURBINE.

(From United States Consul Halstead, Birmingham, England.)

In a recent issue of the London Globe a correspondent gave some information which he had collected regarding the chief steam-turbine plants, planned and now in use in this country for electrical generating stations, the evidence from all sides pointing to the fact that for land no less than for marine purposes there is to be a great development in the use of the steam turbine, with which the possibilities of economy in units of large size have never until within the last year or two been understood. His statement is as follows:

The turbines in use hitherto for this purpose are not numerous and are small in size. The Chelsea power station of the Underground Electric Railway Company, of London—now building—is being supplied with eight turbines of 7,500 horsepower each, or 60,000 horsepower in all. For the generating station of the Metropolitan Railway Company turbines of an aggregate of 14,000 horsepower are being installed, while Brighton Corporation and Liverpool Corporation have on order plant of this type to the extent of 7,500 horsepower and 4,000 horsepower, respectively. The North Metropolitan Power Company are building a station at Brimstown which will supply energy for driving a great system of tramways in Middlesex and Hertfordshire, and here three turbines aggregating 4,000 horsepower will be used. The first steam-turbine electric plant of any magnitude in Scotland is now about to be installed for the Clyde Valley Electric Power Company, the total being 16,000 horsepower. Harrowgate town council are putting down a 1,000-horsepower turbine and the Yorkshire Electric Power Company have on order plant of a similar type with an output of 6,000 horsepower. The power is given in round numbers, but approximately the total just enumerated, neglecting the smaller installations, is no less than 112,000 horsepower. The bulk of these machines are of the Parsons type built by the British Westinghouse Company, but some are Curtis turbines, an American form, made by the British Thompson-Houston Company, and a few of the Parsons model are coming from the shops of the Brush Electrical Company. Quite a number of firms, in fact, are taking up the manufacture of turbines on the Parsons principle. The ingenuity of inventors has been stirred up in the matter of late, and within the last month or two there has been a great increase in the number of applications for patents for steam turbines, among the applicants being Mr. Parsons himself, the subject of whose original patent is at last coming to full fruition.

MARSHAL HALSTEAD, *Consul*.

BIRMINGHAM, ENGLAND, *November 17, 1903.*

Under date of October 28, 1903, United States Consul H. W. Metcalf, in transmitting a newspaper article, too long for publication, on the "Progress of the steam turbine," says:

One opinion seems to be that the turbine will eventually displace the triple-expansion and other forms of reciprocating engines.

JAPANESE INTERESTS IN SIBERIA.

(From United States Commercial Agent Greener, Vladivostock, Siberia.)

TEA TRADE AT STRETENSK.

The representative of the Japanese tea trade at Vladivostock reports as follows:

Stretensk, situated as it is at the point of vantage on the Shilka, is the foremost place where brick tea finds a principal market; Chita, Vladivostock, Habarovsk, and Blagovetchensk coming next, though far behind. The condition of the brick-tea market at Stretensk is simply amazing.

Enormous quantities of the commodity may be seen piled upon the pier, and the town is covered with godowns built solely for its storage.

This prosperous business is due to the fact that the Russian authorities have exerted themselves for generations to develop Stretensk as a center of Siberian colonies, with the result that hundreds of villages have sprung up around it.

The annual amount of brick tea, both green and black, dealt with in the locality is stated to be something like 500,000 boxes.

The wholesale price ranges between 25 and 29 rubles (\$12.87 and \$14.93) per box. Transactions in Japanese products have been opened there quite recently, so they have not had time to gain much ground.

Mr. Inamasu, the agent, thinks there is ample room for Japanese goods to make headway in Stretensk and elsewhere in Siberia.

NEW JAPANESE STEAMSHIP LINE.

The newly established Japanese steamship company—the Oyay & Co., with two steamers, the *Katsu Maru* and the *Aikoku Maru*—keeps regular communication between Japanese ports and the ports on the Sakhalin Island, the maritime Province, and Korea, and receives a subsidy of 140,000 yen (\$72,100) per annum from the Japanese Government. The Oyaya & Co. induced the Osaka-Shosen Kaisha, of Osaka, to join them; the capital of the former amounts to 300,000 yen (\$154,500) and the latter to 165,000 yen (\$84,975). They propose to continue the usual regular trips as heretofore, the former Government subsidy having been guaranteed to them. The *Aikoku Maru* is claimed by the Red Cross Association for a hospital ship, and the steamer *Miasima Maru*, of 1,609 tons, has been substituted therefor.

RICHARD T. GREENER,
Commercial Agent.

VLADIVOSTOCK, SIBERIA, *November 18, 1903.*

NOTES.

Machinery Wanted in Cornwall, Ontario.—A new paper mill is being erected 5 miles from Cornwall, which will want at least half a dozen machines and patterns, besides other requisite millwork.—*John E. Hamilton, Commercial Agent, Cornwall, Ontario, January 11, 1904.*

California Grapes in Bavaria.—Having received an inquiry from A. Kahl, chemist and bacteriologist in Würzburg, Bavaria, as to the purchase of California grapes, I supplied him with the names of such California fruit companies as I possessed and requested him to communicate therewith for further information.—*James H. Worman, Consul-General, Munich, Germany, December 5, 1903.*

Antwerp Exports to the United States.—The calendar year just closed shows a vast increase in the exports from Antwerp to the United States as compared with the year 1902, viz, exports during the calendar year 1903, \$12,426,344, against \$7,945,440 during the year 1902, an increase of \$4,480,904.—*Church Howe, Consul-General, Antwerp, Belgium, January 5, 1904.*

Trade of Dover.—Under date of January 1, 1904, United States Consular Agent F. W. Prescott, of Dover, England, reports that there has been no direct trade between that port and the United States during the past year. The pitch pine used at Dover has been brought coastwise, but the usual cargoes of maize from the United States have given place to a cargo of 4,000 tons from the River Plata, the first direct import of Argentine maize at the port. The Hamburg-American Line will hereafter call at Dover for passengers for and from New York, instead of at Plymouth and Southampton as formerly.

Silver Novelties in Austria.—Under date of January 14, 1904, United States Consul U. J. Ledoux, of Prague, Austria, reports that there is an excellent market for American silver novelties there, the duty on which is \$1.45 per 2.2 pounds. He writes that the firm of Alfred Pollak, having branches in Vienna and Budapest, desire catalogues and prices, their address being 11 Brendanergasse, Prague. They should be addressed in German.

Steam and Automobile Plows Wanted in Belgium.—United States Consul J. C. McNally, of Liege, Belgium, under date of December 31, 1903, writes that he is in receipt of many inquiries concerning the prices and merits of steam and automobile plows, said to be manufactured in the United States and introduced into Belgium through England.

Wall Paper in Hungary.—According to the Royal Hungarian Commercial Museum in this city, "duplex" and "velontine" paper, which serve as bases for wall paper, are not manufactured in Hungary. It is evident that there is a market here for both the finished wall paper and the bases.—*Frank Dyer Chester, Consul, Budapest, Hungary, November 6, 1903.*

American Goods in Liberia.—After careful investigation, I find that the feeling here among the people is a preference for American manufactured goods. Our shoes, lawns, and calicoes, when they can be had, are bought in preference to those of other countries. The merchants here cater to the native trade, and cloths are manufactured to suit their fancy in grade and color. There is not an American merchant in Monrovia. The trade is divided up between England and Germany in the main, the merchants being Liberians, Englishmen, and Germans.—*Ernest Lyon, Consul-General, Monrovia, Liberia, December 14, 1903.*

Steel Material for the Argentine Republic.—A representative of the Argentine Republic is visiting Europe to place orders for 10,000 tons of rails, 3,000 tons of bridge material, and other orders for steel. This representative interviewed the manufacturers at Liege and obtained their prices, and is now in Germany endeavoring to do better.—*James C. McNally, Consul, Liege, Belgium, December 31, 1903.*

American Provisions in Bogotá.—I have received a number of inquiries lately as to American hams, flour, petroleum, preserves, pickles, butter, etc., particularly from Mr. Leopoldo Molina, who is desirous of starting a large wholesale and retail grocery store and wants catalogues, prices, and general information on these and other similar articles. I am informed that he has a good standing and is fully able to conduct such a business on a large scale, and under ordinary circumstances this place would certainly support it.—*Alban G. Snyder, Consul-General, Bogotá, Colombia, December 12, 1903.*

Homemade Street Rails Preferred.—United States Consul J. C. McNally, of Liege, Belgium, under date of December 1, 1903, reports that he has received information from a Belgian manufacturer to the effect that the London market, which has heretofore been a lucrative one for street rails, has resolved, through its council, to patronize home industries hereafter, even though American and Belgian prices are lower.

Electric Light in Bogotá.—The price of electric lights in Bogotá has recently been raised from 30 pesos (30 cents United States) to 50 pesos (50 cents United States) a light per month, and the announcement is made that beginning January 1, 1904, this will probably be further raised to 100 or 150 pesos (\$1 or \$1.50 gold). The price for installment of lights has also been raised from 500 pesos a light to 700 pesos (\$5 to \$7 gold). The reasons advanced for this increase in prices are the cost connected with the transmission of the power to this city, the power plant being at the falls of "Tequendama," about 20 miles distant, and that the power of the present plant is wholly insufficient to supply the demand. This probably makes the price of electric light in Bogotá higher than in any other city of its size.—*Alban G. Snyder, Consul-General, Bogotá, Colombia, November 20, 1903.*

American Trade Interests in Tahiti.—Former United States Consul J. Lamb Doty has inaugurated an American company to handle the wholesale interests of the colony. The capital is \$50,000. The merchants regard the enterprise in a favorable light, in view of the announcement that no established interests will be antagonized. Banking facilities will be afforded the community. The new company aims to save the commissions of middlemen to the local merchant; to stimulate trade by paying cash for produce to the merchant, and by branding and guaranteeing quality of goods, etc. There is a large field for the enterprise in this colony.—*William F. Doty, Consul, Tahiti, Society Islands, December 17, 1903.*

Taxes and Copra in Tahiti.—I have to inform the Department that an increase of 50 per cent in price of licenses for merchants and for shipowners is announced. It is also proposed to tax copra exported from the colony. The grade of copra in this section is excellent and the demand has recently increased from Europe and Australasia, while the San Francisco market will shortly require a large quantity of this high-grade product.—*William F. Doty, Consul, Tahiti, Society Islands, December 17, 1903.*

Dredging Machinery Wanted at Nantes, France.—During the present year bids will be asked by the French Government at Nantes for about \$450,000 worth of dredging machinery to be used in deepening the channel of the River Loire between Nantes and St. Nazaire. The Government engineer at Nantes, whose department is charged with the supervision and possibly with the execution of the work, says that it has not yet been finally decided as to whether bids for furnishing this machinery will be received from foreigners, but he thinks they will. In that event it is believed here that Holland manufacturers will get the contracts, as dredging machines made in that country are already in use in France and are giving satisfaction. If the proposed letting should interest any United States manufacturers of dredging machines, and the manufacturers will communicate with this consulate, I will try to secure and furnish the specifications in time for them to bid. The proposed channel will have a depth of from 18 to 48 feet, on a sandy bottom.—*Benj. H. Ridgely, Consul, Nantes, France, January 8, 1904.*

German Imports of Fresh Fruits.—United States Consul B. H. Warner, of Leipzig, Germany, under date of December 19, 1903, reports the following statistics on German imports of green or fresh fruits during the past four years:

Description.	1899.	1900.	1901.	1902.
Apples.....	\$3,762,780	\$1,895,670	\$3,862,026	\$3,155,642
Pears.....	805,630	815,150	1,099,560	1,158,108
Peaches, plums, apricots, etc.....	3,179,918	963,662	845,376	1,210,468
Oranges, bananas, lemons, figs, etc.....	3,056,872	3,328,430	3,299,394	3,390,786
Grapes.....	2,549,694	1,735,734	2,103,206	3,039,498
Total	13,354,894	8,738,646	11,209,562	11,954,502

The consul states that American apples, pears, oranges, etc., should be sold in Germany in large quantities, and that in subsequent reports in the near future he will deal with some of the reasons why they are not.

Austrian Skins for the United States.—Trieste exports a considerable quantity of sheep and goat skins to the United States. These skins, a large portion of which is bought in the Balkan States, have to be specially assorted for the American market, as our tanners will not accept inferior goods. Attempts made by a number of irresponsible dealers to underbid old and reliable firms in the American market and then recoup themselves by sending indiffer-

ently assorted goods have been the cause of considerable friction between sellers and buyers. Unusually favorable offers in this line of business should always be viewed with suspicion by American tanners.—*Fredk. W. Hossfeld, Consul, Trieste, Austria, October 31, 1903.*

American Rolling Stock Abroad.—The Bavarian Railway has just completed an American palace railway carriage from material imported for this purpose two years ago from the Pullman factories in Pullman, Ill. This is the first railway car of the kind to be introduced into Germany and will no doubt be the forerunner of a regular system of luxurious railway carriages of this kind on German railways. The progressive character of the Bavarian Railway management is well known, not only in this country, but in the United States. The chief of the bureau of railway management, General Director von Ebermayer, has visited the United States and is in thorough touch with American railway enterprises. The new ministry of railways takes office on January 1, 1904, in the department of railways, under the management of a separate minister, Minister von Frauendorfer, a man of like energy and enterprise, and there is reason to look for a larger introduction of American locomotives and palace cars.—*James H. Worman, Consul-General, Munich, Germany, November 19, 1903.*

Roofing Materials and Roof Paints in Colombia.—No tin, sheeting, or other metal roofing is used in the vicinity of Bogotá, on account of the high freights and the difficulties of transportation along the rough mule tracks that serve as roads in this country. The roofing universally used is a tile, semitubular in shape, much resembling in composition and form one of the ordinary sewer pipes used in the United States, cut in half lengthways. Along the rivers and on the coast corrugated iron is much used; in Antioquia shingles are used. The tile roofing is not painted, nor is it the custom to paint the shingles or corrugated-iron roofing; in fact, there is very little of what we call painting done in this section with the exception of the woodwork of houses. Most houses are built of brick, loosely put together without mortar and then plastered over smoothly on the outside. This is frequently whitewashed and sometimes painted over with a substance similar to our calcimine. The colors used are white, dark yellow, pale blue, pink, and terra cotta.—*Alban G. Snyder, Consul-General, Bogotá, Colombia, October 20, 1903.*

Coal Trade of Northern Brazil.*—An unequaled opportunity which has been far too long overlooked or ignored by Americans is the coal trade of northern Brazil. There should be an American coal station at Para and a branch at Manaus. Every lump of coal burned here is imported, and the consumption is enormous and steadily growing. Thousands of steamers coal here annually, and the private consumption in Para and other cities and towns in the Amazon Valley is very large. Ordinary soft coal sells here for from five to eight and ten times its cost in the United States. The profits are enormous. There is no good reason why a splendid trade in American coal should not be established. At present this enormously profitable trade is entirely in the hands of the English. No concerted effort has been made here to create a demand for American coal. The United States ought to supply this market, and with earnest well-directed effort it can.—*K. K. Kenneday, Consul, Para, Brazil, September 11, 1903.*

American Sulphate of Copper in Austria.—The demand for sulphate of copper is decreasing and the receipts fell from about 36 metric tons in 1901 to 22.4 tons in 1902. The imports from the United States constitute about 70 per cent of the whole, viz, 15.4 tons. American packing of sulphate of copper has improved, but is still far from being as satisfactory as the British. I believe it would pay our exporters to adopt for foreign shipments the hard-wood barrel. Such barrels would not only be much less likely to burst open during the voyage, but would sell in Austria, when emptied, for more than their cost, while soft-wood barrels can be used only for kindling. It might, at the same time, be advisable to reduce the size of the barrel. For shipments to the interior Trieste importers are compelled to repack the American article, using for this purpose a barrel containing only 550 pounds, on account of the greater convenience in loading and unloading.—*Fredk. W. Hossfeld, Consul, Trieste, Austria, October 31, 1903.*

American Purchasers of Siberian Furs.—An American company is very liberal in offering high prices for furs of various kinds here. The prices recently offered were \$5.41 for foxes and 23 cents for squirrels. At such prices the merchants will naturally stop the transportation of furs to Irbit and other places of fur trade. From the Transbaikal Province comes the news that sable hunting during the past winter has been a great success. The number of sable skins

* Extract from the annual report of Consul Kenneday, which will be printed in full in *Commercial Relations* for 1903.

on hand is larger than in any of the preceding seasons. Buyers avail themselves of this abundance and offer the hunters very low prices. The average price paid to the hunters is from \$12.88 to \$15.45. The buyers expect to make 300 per cent profit on the purchased sables. The high price of furs for the past few years has attracted foreign merchants to this region. An American from New York came via Irkutsk early in the season and visited the whole maritime coast. He purchased chiefly sables, paying from \$18.03 to \$38.63 per piece, purchasing in all, it is said, \$77,250 worth. He got ahead of the English and Russian buyers. The Russian merchants arrived on the first steamer, the *Soongari*, but they could get only a small number at the auction. Even here the enterprising American outbid them. Squirrels were sold at 33 cents each.—*Richard T. Greener, Commercial Agent, Vladivostock, Siberia, November 15, 1903.*

American Manufactures in British Columbia.—The principal openings in this district for United States products are in connection with the mines and smelters. A number of new smelters are going up in Lardeau and other districts and many mines in the same districts will put in valuable machinery at an early date. A couple of railroads are also to be built throughout the Kootenai section in the immediate future. At Poplar Creek, the new mining camp, there will be an opening for mining machinery (also for stamp mills and concentrator machinery) any day now. There is a better feeling in trade matters all through this country, and travelers for firms on both sides of the line say they are securing heavier orders than they have for years past. I would suggest that our exporters send good agents into this country, and I think they will find that it will pay them to do so. There is a good market here for mining, stamp-mill, concentrating, and smelting machinery, provisions of all kinds, fabrics, typewriters, furniture, safes, cables, tramways, steel, iron, and hardware of all kinds, lumber-mill machinery of all classes, clothes, boots, shoes, etc.—*Geo. A. Ohren, Consular Agent, Rossland, Canada, November 1, 1903.*

American Meat a German Necessity.—“Nothing,” says the Berlin Chamber of Commerce, in its last annual report, “can take the place of American bacon as a cheap and nutritious article of food for the masses of our population. Therefore, it would be a matter of deep regret if the high import duties of the new tariff law were not reduced to a reasonable degree. The year 1903 will test the ability of German meat packers to supply the country with

canned beef, which formerly was supplied by the United States and Australia, excellent in quality and cheap in price. Hitherto, German canned beef has not come up to the foreign product in quality and appearance; whether it will improve in these respects remains to be seen. However this may be, there is just cause for feeling that German canned meat will be so high in price as to fail of becoming a popular food; consequently, the injury which will be caused by the new laws will be obviated if foreign canned meat is again allowed to come into Germany."—*Simon W. Hanauer, Deputy Consul-General, Frankfort, Germany, November 5, 1903.*

British Adoption of American Weaving Methods.—The visit of British cotton spinners and manufacturers to the United States some months ago is apparently bearing substantial results. Changes are being adopted in some of the largest weaving establishments along the line of economical administration, but most significant of all is the tentative introduction of the American automatic loom in several mills. In other establishments recent inventions for the automatic change of the shuttle are being tested, and in some factories the American system of cloth and welt carriers and loom oilers and cleaners is being introduced, so that the weaver's duty is limited to weaving alone. For relieving the weavers of the duties thus automatically performed one firm proposed a reduction of $3\frac{1}{2}$ d. (7 cents) per loom per week, which has caused a strike. The workmen claim that the incessant confinement to the loom is more trying than the former condition, the carrying of completed cloth pieces to the warehouse and the cleaning and oiling of the looms being in fact a restful change. No speedy settlement of the controversy is in sight.—*Frank W. Mahin, Consul, Nottingham, England, December 19, 1903.*

Spanish Catalogues in Brazil.—United States Consul Walter Schumann, of Mainz, Germany, under date of December 5, 1903, sends the following translation of a letter from a gentleman residing at Sao Paulo, Brazil, to a German trade journal, which will be of interest also to American exporters to that country:

A Brazilian who is thoroughly acquainted with his own language—the Portuguese—will be able to understand a catalogue in the Spanish language without much trouble, both languages being closely related. Nevertheless, Spanish catalogues are not looked upon more favorably in Brazil than catalogues in the English, French, or German languages. If, however, a Spanish catalogue comes from Spain or other country in which Spanish is the language of the country, it is, of course, as welcome to the Brazilian merchant as a French catalogue from France, an English catalogue from England or the United States, or a German catalogue from

Germany, for the knowledge of these languages is by no means a rarity among Brazilian merchants.

Should an American, an English, or a German merchant send to Brazil catalogues intended expressly for that country but printed in the Spanish language, he can almost be certain that such catalogues are thrown into the waste-paper basket without even being looked at, and that with the compassionate mien of the Brazilian who pities the foreigner who thus seeks to do business with Brazil and does not even know that the language of Brazil is Portuguese; or else the Brazilian merchant may even feel insulted at being addressed in any language other than his own. It is therefore advisable that foreigners wishing to do business with Brazil make use of their own language, if they are not acquainted with the Portuguese language, rather than avail themselves of the Spanish language.

America and Germany as Teachers.—*Deutsche Export-Revue*, a leading German industrial journal, in its issue of October 15, 1903, says:

An important work on the United States by Wilhelm v. Polenz, "*Das Land der Zukunft*," has just appeared, and in view of the exposition which the United States is to hold nothing could have been more timely. He says:

"The most noteworthy surprise of the New World is that everyone with the power of discovery that goes thither is able to discover it anew, but no one is competent to write concerning the United States only those whose critical sense has been saturated by the powerful impressions of that wonderland. I have found that we are never so proud as when making a journey, but I have also noticed that our survey of the weakness of German life can never be so well impressed upon us as when we compare ourselves with another strong nation.

"It has become the fashion to wonder at American institutions and to consider them worthy of imitation; but it would be most unwise for us thoughtlessly to incorporate the American nature into our own life. That this young nation across the ocean should give birth to freer customs and more up-to-date accommodations than Europe in its narrowed sphere is natural, but it is as impossible to Americanize Europe as it would be to bring the United States to look at things from the standpoint of Europe. It is one thing to become absorbed into a strange people without resistance, as the German often does, to his harm, and another to endeavor to be just in regard to them. Boundless wonder should not seize us in regarding the United States, and in opposition to the 'unbounded possibilities' should be placed the saying of the Germans, 'Care will be taken that the trees do not grow to the heavens.'

"No extra-European nation has made such progress in all lines as has the United States. With no country have we had such traffic as with the United States. There are no two other nations which could learn more from each other, nor do any two nations so thoroughly fail to understand each other. Gigantic is the only word with which to measure the traffic between the shores of the two countries. The two peoples may touch each other outwardly in a hundred ways, but their souls do not meet. The rôles have been changed. Whereas formerly, at least for a very long period of time, European influence was the dominant one in civilization, Europeanizing all people that it touched, to-day it is the United States that is Americanizing everything, even Europe. With no nation on earth has the Empire had closer relations than with the United States, particularly since 1870."

Foreign Chambers of Commerce.—The growth of cooperation among the mercantile interests of Europe is outlined in a recent issue of *Das Handels-Museum*, one of the leading German industrial journals, as follows:

Foreign chambers of commerce are of Austro-Hungarian origin, for in 1870 the first Austro-Hungarian chamber of commerce was opened in Constantinople; afterwards similar institutions were opened in Alexandria, Paris, and London. In the spring of this year (1903) an Austro-Hungarian chamber of commerce was opened in Melbourne. The English, adopting the example of the Austrians, founded a chamber of commerce in Paris. The Austrians have been far surpassed in number of these institutions by the English, who now have 30 in foreign countries and 100 in their own colonies. The United States have chambers of commerce in Paris, Brussels, London, Berlin, Sydney, and Shanghai. The first North American chamber of commerce was founded in the seventies. The development of the French foreign chambers of commerce has been satisfactory. France has 29; 3 are in the Orient—Constantinople, Smyrna, and Alexandria—and the others are found in all parts of the world. It was to aid the growing trade of France with eastern Asia and South America that the French chambers of commerce were founded in those countries. Of the other countries Holland has more than 7, Spain 3, and Italy and Belgium 2 each; Germany has but 1 foreign chamber of commerce (in Brussels). Russia has 2, in Paris and Alexandria. Several cities have a number of foreign chambers of commerce; for instance, London has 1 each for Austria-Hungary, the United States, Belgium, France, the Netherlands, Italy, and Spain.

Brazilian Crude Drugs.—A conspicuous feature of the rapidly expanding trade between the Amazon region and the United States is the growth of the drug trade. Brazil produces a long list of medicinal herbs, roots, berries, beans, balsams, and other crude supplies for the manufacturing chemist and perfumer. Many of these are staple articles and others are just becoming known to the trade. Heretofore not much importance has been attached to this line of exports, but latterly manufacturers have turned their attention to this region as a source of crude supplies. With the largely increased and growing demand for these products local merchants have become interested, and without doubt this branch of trade will soon develop into an important factor in the exports from the Amazon region.—*K. K. Kenneday, Consul, Para, Brazil, September 1, 1903.*

Cacao Crop of Brazil.—The cacao season of 1903 is much later than that of 1902. Cacao is a very erratic crop, and the oldest inhabitant will not venture a prediction on it. The last of the crop of the previous year was practically all in the manufacturers' possession by this time. This year it is still coming in abundantly and will probably run far into September. The cacao season includes

two crops, beginning, respectively, in January and June. The summer crop is said to be a shade better (because dryer) than the winter crop, though the yield should be about equal. This year more cacao came into the market in July than was received during the entire six months preceding. A few days ago about 2,000 tons were stored in Para and every steamer was taking away large cargoes of it. However, the demand continues strong and the price good.—*K. K. Kenneday, Consul, Para, Brazil, November 20, 1903.*

Cattle Ranching and Farming in Northern Brazil.*—Much attention is being devoted to cattle ranching and general agriculture on the upper Amazon and its tributaries. In those regions the most enticing, valuable, and suitable grazing and farming lands are being offered for sale at merely nominal prices for the purpose of inducing immigration, and there is no doubt there will be a large travel in that direction in the next few years, as the offer is attracting extended notice in Europe as well as in the United States. Many already here, both Brazilians and foreigners, are turning their attention to agriculture and cattle breeding, as they begin to realize the unparalleled and virgin field at their very doors and the natural advantages offered. I am glad to report in this connection that large cattle steamers from the United States continue to arrive here loaded with fine breeding cattle and mules, which will bring about a very much needed improvement in the local stock.—*K. K. Kenneday, Consul, Para, Brazil, September 1, 1903.*

Brazilian Coffee Crop of 1904-5.—Careful investigation leads me to assume that the coming coffee crop (harvest of 1904-5) throughout the coffee States of Brazil will, from present indications, likely be below the average. It is of course impossible as yet to get reliable estimates, but there is no doubt that the coffee trees have suffered a great deal lately; first, probably on account of exhaustion, in consequence of consecutive abundant bearing, and, second, through very severe droughts that have prevailed for the last few months. There has consequently already been a considerable rise in the prices of coffee here as well as abroad; but this seems to be caused more by speculation than the natural condition of the market, as the visible supply in the United States, as well as in Europe, is large enough to satisfy a year's consumption without any further receipts. The

* Extract from the annual report of Consul Kenneday, which will be printed in full in *Commercial Relations for 1903.*

present rise in prices will mostly benefit the dealers abroad who hold large stocks, the producers having already disposed of nearly all their holdings.—*Eugene Seeger, Consul-General, Rio de Janeiro, Brazil, December 9, 1903.*

The Brazil-Nut Crop.—The crop of Brazil nuts for the year 1903 is now practically delivered, and accurate statistics can therefore be quoted. This year's crop will exceed the great crop of 1902 by 800 tons. The season now closing is a record breaker in several ways. In the first place the United States developed an appetite for nuts that was practically insatiable. Never before were such enormous cargoes of nuts shipped as during this season. All the big orders went to the United States. The total shipments of nuts from the Amazon up to date are 7,734 tons. The most conservative estimate of the remainder of the crop (now in transit) places it at 300 tons, a total for the year of 8,034 tons, of which the United States has so far taken 4,964 tons and Europe 2,770 tons. A brief comparison with the shipments of previous years will show how remarkably this branch of the export trade has developed. The total crop of 1900 was 2,514 tons, of which the United States took 44 per cent; of 1901, 2,808 tons, of which the United States took 50 per cent; of 1902, 7,200 tons, of which the United States took 55 per cent. This year the crop is above 8,000 tons, of which the United States will take about 66 per cent. The strong demand from the United States has held the market firm and high throughout the season. Never before has the market been so steady and inflexible, but, though ruling above the average, prices have not been exorbitant and a fair profit has been afforded to buyers and sellers alike.—*K. K. Kennedy, Consul, Para, Brazil, November 8, 1903.*

New Currency Law of Paraguay.—A financial law just promulgated fixes the values of gold, silver, and paper currency in Paraguay. Article 1 of this law fixes the gold and silver of the Argentine Republic as the legal currency in Paraguay. According to this law the United States \$20 gold piece is worth \$20.40 and the English sovereign \$5 in Paraguayan gold. The banks and exchange houses observe this law. For instance, in making a draft on the United States they will take each dollar at \$1.02 when it really bears a premium of $3\frac{1}{2}$ per cent mint value in the Argentine gold. The exchange as a rule is quoted at the rate of the day on which Argentine gold is being sold. At present Argentine gold is stationary and has been so for weeks, its rating being \$8.75, which means that \$8.75 Paraguayan paper will purchase \$1 Argentine gold. This

makes the Paraguayan paper dollar worth at present $11\frac{1}{2}$ cents gold. In addition to the foregoing quotations of American gold there is a bank discount and a computation of interest to be calculated. The silver pieces of 25 grams, 0.900 fine, will be valued at 94 cents Paraguayan, and the fractions their respective values accordingly.—*John N. Ruffin, Consul, Asuncion, Paraguay, November 1, 1903.*

New Port of Entry in Venezuela.—A telegram from the United States chargé d'affaires ad interim at Caracas states that by an executive decree of the 7th of December a new port with a custom-house is established at Cristobal Colon, situated in the bay of the same name, on the western coast of the Gulf of Paria, directly west of the Isle of Trinidad. The new port is to be opened to foreign commerce. The decree further provides that as soon as the work at Cristobal Colon shall be finished and the custom-house shall be in operation, Ciudad Bolivar is to be opened to foreign commerce as formerly.

Establishment of a Custom-House at Tucacas, Venezuela.—By virtue of a decree of the President of the Republic, dated November 28, 1903—a translation of which is inclosed—a first-class custom-house has been established at Tucacas, making that port a port of importation, exportation, and for coast trade for about all of Venezuela west of Puerto Cabello, which will reduce the imports and exports of this port considerably. The Minister of Finance has directed that until there is constructed the edifice in which the custom-house of Tucacas is to be established, the merchandise brought from foreign countries destined for that port shall be manifested, as in transit, at the custom-houses of La Guaira or Puerto Cabello; and after it has been recognized and its duties liquidated it will be dispatched via coast trade for the port of Tucacas, in conformity with and as disposed by the resolution dictated by the Ministry of Finance dated September 7 of this year, with the same reduction of 5 centimes of a bolivar (nearly 1 cent) for each kilogram (2.2046 pounds) of weight.—*Luther T. Ellsworth, Consul, Puerto Cabello, Venezuela, December 5, 1903.*

Petroleum as Fuel.—The use of petroleum as fuel in Europe is assuming still greater proportions. The production has so increased that new uses for it are looked for. It is expected that its use for navigation will become very important. In some countries, especially in Russia, it is already extensively used. Its use for other

firing purposes depends on the perfection of the manufacture of petroleum briquettes. In metallurgy, especially in the production of copper, petroleum fuel is said to be very efficient. Mining Engineer Muck, however, is of the opinion that petroleum can only successfully compete with coal where it can be had at a low price or where it is essential to store a large quantity of fuel in a comparatively small space.—*Richard Guenther, Consul-General, Frankfort, Germany, December 18, 1903.*

Production of Argon.—The Paris chemist Henri Moissan, aided by another chemist, has found a new method for producing argon, the component part of the atmospheric air, the discovery of which by Lord Rayleigh and Professor Ramsay some years ago created quite a sensation. The gas argon is contained in very infinitesimal quantities in the air, and on account of the difficulty of obtaining it it could never be thoroughly examined. Moissan obtains it from the air by passing the same through a red-hot tube filled with spirals of copper. In this manner the oxygen of the air is taken up and the gas emanating from the tube consists of nitrogen and argon. The nitrogen is then taken up for the most part by a mixture of magnesium and lime, and the remainder by calcium heated to a red heat. In this manner it has been possible to obtain a quart of argon in one day. Thus a way has been found to examine it chemically.—*Richard Guenther, Consul-General, Frankfort, Germany, December 17, 1903.*

Another New Metal.—United States Consul-General Guenther, of Frankfort, Germany, under date of December 11, 1903, sends the following translation of an article which recently appeared in the Frankfort News:

A new metal which is similar to aluminum, but still of lesser weight, has been discovered by the French engineer Albert Nodon, and called "nodium," after him. It is manufactured by an electric process. In color, luster, and structure it is almost exactly like steel. Its specific weight when molten is only 2.4. Its resistance against breaking is given as about 20 pounds per square of 0.04 inch. Its constancy in the air is higher than that of aluminum. Its ductility is between 6 to 8 inches; the malleability can be compared to that of bronze. It melts at about 600°. It is suitable for being cast into forms. The conductivity for the electric current is as high as that of copper of equal weight. If natural power, especially water power, can be used for its manufacture, the cost in round figures is about 15 cents per pound. The inventor expects numerous uses of nodium in the near future, especially for electric wires and cables, for light but strong parts of motor cars, torpedo boats, men-of-war, street cars, military outfits, air ships, etc., and for castings in place of bronze, German silver, and similar metals. Nothing definite has yet been communicated as to the chemical composition of nodium, nor as to the mode of its manufacture.

Horse Vehicles vs. Automobiles.—German papers report that the French committee for automobile traffic has made a series of experiments in the Bois de Boulogne for the purpose of comparing the quickness with which horse vehicles and automobiles can be stopped. The macadamized road was muddy and it was to be expected that the hoofs of the horses would find a better hold than the rubber tires of the motors. The latter, however, showed themselves superior in this respect. Two vehicles with one horse each, two with two horses each, and one with a pony competed with an automobile of 6 and one of 40 horsepower. At a speed of $7\frac{1}{2}$ miles per hour the horse vehicles could only be completely stopped at 30 feet; the two motors, at 10 feet. At a speed of 10 miles per hour the one-horse vehicle stopped at 40 feet; the motors, at $13\frac{1}{2}$ feet. At a speed of $12\frac{1}{2}$ miles per hour the distance increased to $43\frac{1}{3}$ feet and $16\frac{3}{4}$ feet, respectively. As one of the horses was overworked, the automobiles made some further tests alone, resulting in stopping at $33\frac{1}{3}$ feet at a speed of 16 miles per hour and at 60 feet at 25 miles per hour.—*Richard Guenther, Consul-General, Frankfort, Germany, December 12, 1903.*

New Process for Manufacture of Iron Alloys.—Ferrosilicon, ferromanganese, or similar iron alloys are obtainable, according to a French patentee, in two operations, with the intermediate production of barium or other silicate or of a mixed oxide, and the ultimate production of baryta, strontia, soda, potash, or like oxide as a by-product. The barium silicate, obtained by heating barium sulphate with silica and carbon in proper proportions in a glass furnace, or in an electric furnace which is worked at a moderate temperature, is heated with proper proportions of carbon and cast or wrought iron, ferric oxide, or manganese dioxide, giving the alloy, barium oxide, and carbon monoxide. This operation is performed in a closed electric furnace at a moderate temperature, passing the gas through a dust chamber. The furnace product is treated with hot water and yields barium hydrate. In a modified process manganese and iron oxides are partially reduced by heating either with sodium sulphide in an ordinary furnace or with barium sulphate and carbon in an electric furnace. The mixed oxides thus obtained are heated with carbon in an electric furnace. When soda is produced it may be volatilized completely from the electric furnace to a collecting chamber.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 11, 1903.*

Carbureted Air Light.—Dr. Hugh Marshall, fellow of the Royal Society of Edinburgh, lecturer on chemistry in the University of Edinburgh, has invented another method of using carbureted

air for lighting. It is an improvement upon the form of lamp devised by M. Naum Notkin, of Moscow, in which carbureted air was obtained by employing paper pulp saturated with gasoline to produce the vapor required. In this Notkin "gravity" lamp the carbureted air, being denser than air itself, flowed from a higher to a lower level, instead of ascending like coal gas, and could therefore be poured from one vessel to another, like a liquid. In the Marshall lamp the necessary current of air through the carbureter is not maintained by the effect of gravity, but by means of the draft from the lamp chimney. It is thus possible to have the body of the lamp below the actual burner. To reduce the manipulation necessary with such a lamp when used for incandescent lighting, Doctor Marshall has invented a form of burner tube, which is sunk axially into the body of the containing vessel, and which enables the user to regulate the mixture of vapor and air to a nicety by simply rotating the tube in one direction or the other. The new method of using carbureted air has been applied by Doctor Marshall to various types of lamps—table and portable, hanging, basket, and also in lantern form for outdoor lighting. These show a brilliant incandescent light, without any liquid or wicks being used, and are free from smell or smoke. Doctor Marshall claims also that carbureted air can be supplied all over a house without danger or complicated processes, and that the gas can be applied to other purposes than lighting, such as for heating and motive power.—*Rufus Fleming, Consul, Edinburgh, Scotland, November 25, 1903.*

Imports of Lard into Cuba.—A report forwarded from Habana, Cuba, by United States Chargé d'Affaires Sleeper, under date of January 6, 1904, announces that the chief of the health department of Cuba has agreed to recommend that compound lard imported into Cuba shall bear the words "manteca artificial" (artificial lard) on each package, roll, or vessel containing such material, and that he furthermore stated that no objection would be made to the use of the English words "compound lard" on the package, roll, or vessel; provided, always, that the Spanish lettering be of the same size as the English. This is a modification of the original recommendation that compound lard imported should bear upon the package the words "no es manteca de cerdo" (not hog's lard).

Pine Lands of Honduras.—I would call the attention of Americans looking for opportunities for investment to the large tracts of pine lands in Honduras, which in the near future should be of great value, if for no other reason than on account of the turpentine which they could be made to yield. There are tracts of pine

lands on navigable rivers leading to the sea and within 30 miles of the railroad, containing thousands of acres, which at present can be purchased at very low prices.—*William E. Alger, Consul, Puerto Cortes, Honduras, December 10, 1903.*

Reduction of Argentine Duties.—Acting Secretary of State Loomis, under date of January 13, 1903, transmits to the Secretary of Commerce and Labor the following telegram, dated December 9, 1903, from the United States minister to the Argentine Republic:

First additional 5 per cent duty on all imports removed January 1. Law revoking second additional 5 per cent duty on imports paying 10 per cent or over goes into effect Monday next.

Belgian Coal Miners for British Columbia.—A local representative of the Canadian Pacific Railway Company is shipping Belgian coal miners to British Columbia, offering as an inducement employment at wages from 15 to 20 francs (\$2.90 to \$3.86) a day. As the average wage per day in Belgium is about 5 francs (96 cents), these workmen are only too willing to emigrate. The men are obliged to pay their passage, but whether it is advanced to them by the company, to be repaid later on, I am unable to state. I am informed that the British consular officers in Belgium are most active in "booming" their American possessions, and that they give free illustrated lectures on the subject.—*James C. McNally, Consul, Liege, Belgium, December 18, 1903.*

Prospective Quinine Trust.—Dutch Indies papers comment upon rumors that the Peruvian-bark raisers of Java are to form a trust. As Java supplies fully 75 per cent of the total amount of Peruvian bark used in the world, and only eighty planters are engaged in cultivating the trees, it is proposed to erect more quinine factories in Java and to use at least one-half of the yearly crop for this purpose, as well as to interest the Peruvian-bark growers in other countries in the trust and so dictate the price for quinine in the market of the world independent of the European industry.—*Richard Guenther, Consul-General, Frankfort, Germany, December 14, 1903.*

All-Steel Freight Cars in England.—A correspondent of the Times announces that the Caledonian Railway Company, the first British railway to experiment with high-capacity freight cars—they were followed by the Lancashire, Yorkshire, and Northeastern

companies—having found their initial experiment successful, gave extensive orders for a large number of 30-ton all-steel bogie wagons (8-wheel freight cars) a few months ago and will have, in a few weeks, between 500 and 600 of these vehicles at work. Additionally, they have introduced a number of hopper-bottomed wagons of 40 tons capacity. Both classes of cars have been fitted with Westinghouse brakes, with hand brakes on each side, and a brake block on each wheel.—*Marshal Halstead, Consul, Birmingham, England, November 16, 1903.*

Belgian Glass Trust.—The Frankfort Journal of Commerce states that the committee of the Belgian glass manufacturers, which was charged to investigate the question of forming a glass trust, reports such a trust as urgently necessary in order to oppose the demands of the labor unions for wages and to obtain better selling prices in foreign markets. A committee of five persons, consisting of two glass manufacturers, two engineers, and one architect, is to fix the value of the different factories. The committee recommends the raising of the working capital by issuing \$2,000,000 of stock. The trust is to remain in force for thirty years.—*Richard Guenther, Consul-General, Frankfort, Germany, December 16, 1903.*

Exposition in Liege.—The Bureau of Statistics has on file a copy of the general programme, classification, and rules to govern the Liege Universal and International Exhibition to be held in 1905. It was furnished by United States Consul J. C. McNally. Parties desiring to exhibit or to secure information should write to the central administration, 14, Quai de l'Université, Liege, Belgium.

South African Exhibition.—Under date of November 21, 1903, United States Consul-General W. R. Bigham, writing from Cape Town, urges the appointment, in the interests of the manufacturers and merchants of the United States, of a commissioner to the South African exhibition to be held in Cape Town during the months of November and December, 1904, and January, 1905. He calls attention to the fact that this exhibition will offer an excellent opportunity to exhibit goods and he believes that our merchants and manufacturers would receive great benefit by exhibiting. He says, further, that some commissioner should be appointed from among the American citizens resident in South Africa at the present time. He thinks some one could be found to act.

Commercial High School for Berlin.—The *Frankfurter Zeitung* of December 20, 1903, states that the Prussian Government has approved the establishment of a commercial high school for Berlin, which is to be called into existence by the corporation of the seniors of the Berlin merchants.—*Richard Guenther, Consul-General, Frankfort, Germany, December 22, 1903.*

German Railway-Car Axles for India.—According to the *Daily Mail*, the British Government has placed orders in Germany for 800 pairs of axles for Indian railroads. British manufacturers of railway material, especially locomotive works, are dissatisfied, as the leading English works had furnished bids, and as many works in Sheffield are greatly in need of orders, having been forced to discharge men. It is said that the matter will be discussed in Parliament.—*Richard Guenther, Consul-General, Frankfort, Germany, December 7, 1903.*

Colonial Industrial Experts.—Forty German chambers of commerce are taking steps to organize committees of experts in industrial matters connected with the colonies. Berlin, Barmen, Chemnitz, and Wiesbaden have already appointed such committees. Bremen, Dresden, Hamburg, Hanover, Cologne, München-Gladbach, Plauen, Reutlingen, and Schweidnitz will carry on the work of experts, partly by means of additions to the present organizations and partly by appointing referees connected with such subjects.

Adulteration of Chocolate.—United States Consul-General Richard Guenther, of Frankfort, Germany, under date of December 23, 1903, reports that at the instance of competitors a legal process was instituted against a certain manufacturer of chocolate for adulteration of his wares. An examination of the confiscated goods showed an addition of 10 per cent of flour and of much sugar and oil of sesame. The court acquitted the defendant because his customers declared that they did not feel injured, as they knew of the inferior value of the goods, for which they paid a reduced price.

German Coal for Paris.—The Commercial Intelligence, of London, announces that the Germans are attempting to capture the coal trade of Paris. Good German house coal is offered, delivered free at all Paris railway stations, at about 30s. (\$7.30) a ton in large quantities. The municipal price of Belgian coal in Paris is about £2 12s. 6d. (\$12.77) a ton, and English anthracite is dearer. The offer has created surprise in Parisian commercial circles.

German Sugar Statistics.—The exports of German sugar in November, 1903, amounted to 65,529.6 metric tons of raw beet sugar, 11,464.2 tons of crystallized sugar, 9,635.8 tons of granulated sugar, 3,503.3 tons of sugar in plates, sticks, and cubes; 2,868.3 tons of refined sugar and loaf sugar in small lots; and 660.5 tons of confectionery. The total production of the German sugar factories in the three months from September 1 to November 30, 1903, was 1,381,451.4 metric tons of raw sugar. The amount of sugar beets used from January 1 to December 30, 1903, is estimated at 12,559,609.6 tons net weight, an increase of 1,288,632 tons over the previous year.—*Richard Guenther, Consul-General, Frankfort, Germany, December 16, 1903.*

Consolidation of Banks in Prussia.—Within the last two years many small banking institutions in Prussia have been consolidated with large ones, especially in the industrial districts of Rhenish Westphalia, where during that time seven banks—including the Exchange and Commission Bank of Cologne—with an aggregate capital of \$12,000,000, not counting the reserve fund, have ceased to exist. The Rhenish Discount Society consolidated during the last year with the Exchange Commission Bank of Cologne (consolidated capital, \$20,000,000) and the Bank of Coblenz (capital, \$480,000); the Bank of Commerce of Barmen (capital, \$1,470,000) with the Bergisch-Maerkisch Bank; the German Bank with the Duisburg-Ruhrort Bank (capital, \$2,860,000); the Banking Association of Düsseldorf (capital, \$2,143,000) with the Banking Association of Barmen; and the Bank of Dueren with the People's Bank of Euskirchen (capital, \$120,000).—*Richard Guenther, Consul-General, Frankfort, Germany, December 22, 1903.*

German Experts in Foreign Countries.—*Handel und Gewerbe*, the official organ of the German Commercial Union, edited by Doctor Soetbeer, says that the German Empire has appointed commercial experts at St. Petersburg, New York, Buenos Ayres, Valparaiso, Shanghai, Sydney, New South Wales, Pretoria, and Constantinople. The purpose of appointing commercial experts to represent the Empire at the great commercial centers of the world can not fail to have a very considerable effect upon export, and incidentally upon the import trade of the Empire. Were it possible to secure the services of consular experts in the lines followed by merchants and manufacturers in their districts, there would be no great need for commercial experts, but inasmuch as such consular services have not been

secured the need of just such experts is manifest. Germany is undoubtedly getting a great deal out of such services. Doubtless the number of experts will be increased from time to time, as their value has been indicated by reports in the German papers.

Decrease of Mortality from Tuberculosis in Germany.—United States Consul-General Richard Guenther, of Frankfort, Germany, under date of December 17, 1903, reports that the monograph of Professor Mayet, *Twenty-five Years of Statistics of Mortality*, published by the German imperial office of statistics, furnishes a gratifying picture of the decrease of mortality from tuberculosis in Germany. It says the mortality from this cause in the German cities of 15,000 and more inhabitants for every 10,000 people for every five years was, on the average, as follows:

1877-1881.....	357. 7
1882-1886.....	346. 2
1887-1891.....	304
1892-1896.....	255. 5
1897-1901.....	218. 7

German-South American Steamship Line.—The so-called “Cape” steamers of the Hamburg-South American Steamship Company, which have so quickly won deserved popularity on account of their large size and their excellent passenger accommodations, will very soon be increased in number. The *Cape Ortegal* and *Cape Blanco* are now approaching completion at Hamburg. They are double-screw steamships, built especially for the La Plata trade, and will surpass in beauty, as well as in the comfort and convenience of their staterooms and saloons, all passenger vessels now in use in that part of the world. Special attention is being given to the arrangement and furnishing of the dining rooms. A novelty which will certainly be of interest to passengers traveling with their families is the children’s saloon, a play room provided for juvenile passengers. Another surprise on both steamers consists of charming little arbors, similar to those commonly used in German gardens. These arbors will be placed on the after-decks of the two new steamers, and will no doubt prove very attractive to passengers in the Tropics. The *Cape Ortegal* will begin its first voyage in March, 1904, and the *Cape Blanco* will follow a month later.—*George H. Murphy, Vice-Consul-General, Frankfort, Germany, December 8, 1903.*

German Trade and Industries.—Under date of November 3, 1903, United States Deputy Consul-General Hanauer sends the following notes, translated from the last annual report of the Leipzig Chamber of Commerce:

Consumption of herrings.—There has been an extraordinarily large demand for salted herrings during the past year, which is to be attributed to the depressed condition of labor and the steadily rising prices of meat.

Shoe machinery.—The manufacture of shoe machinery was depressed, owing to the competition of American machines, and was especially hurt by the action of a United States shoe-machinery trust, which rents its machines to shoe manufacturers instead of selling them outright.

Pianos.—The trade in pianos kept up in volume to that of last year, although the exportation of these instruments to the United States has gone down to zero. The reason for this lies in the fact that the manufacture of pianos in the United States has attained high efficiency and is conquering foreign markets.

Parlor organs.—Trade in harmoniums (parlor organs) has been fair, but the United States is the greatest and most able competitor in this line of products, furnishing half the quantity which Germany uses. The American makers will always maintain their position, owing to the advantage they enjoy in having native walnut wood of best quality at low cost. A German specialty in electrical pianos has met with great success, ousting the automatic musical machines.

Italian vs. German markets.—Italy is becoming a dangerous competitor to Germany in transoceanic markets. Not only has German exportation of medium and low priced worsted goods to Italian markets sharply declined, but Italian cotton yarns and textiles are giving Saxon manufactures a lively tussle in foreign markets.

Receipts from Bicycle Tax in France.—The Minister of Finance has just published his report of the receipts from the tax on bicycles for the year 1903, the total sum collected on 979,750 bicycles being 6,921,238 francs (\$1,384,247.60). The number has increased from 329,816 in 1896 to the above figures in 1903.—*John C. Covert, Consul, Lyons, France, December 4, 1903.*

French Codfish Catch of 1903.—United States Consul R. M. Bartleman, of Cadiz, Spain, under date of November 25, 1903, forwards the following extracts from an official report on the operations of the French cod-fishing fleet during the season of 1903:

This season's catch of codfish was disastrously small compared with last year's catch. Last year 101 fishing ships entered by November 1, whereas this year there entered but 55 vessels, and these with small quantities—not for lack of fish on the banks, which were plentiful, but owing to an excess of nature's food, which was so abundant that, in spite of their natural greediness, the fish found sufficient nourishment without taking the hook. The fishing on the banks of Newfoundland has also been very poor. This year's catch,

it is estimated, will be less than half of that of the previous season; in consequence, prices will be very high—an increase over those of last year of \$4.24 to \$4.63 per 220 pounds. The last transactions were at \$13.12 to \$13.31 for exportation and \$15.05 to \$15.44 for dried fish. Even at these high prices many owners did not wish to sell, drying and storing for better prices. Other countries have not been more favored. In Labrador the catch was nearly as poor as during the previous season, and in Norway it was unsatisfactory. If the winter temperature is normal and unforeseen circumstances do not occur to restrain consumption, the supply on hand will not meet the demand of France and other countries, and from necessity there will be no codfish until the catch of 1904, which commences in May.

Growth of Mexican Railroads.—Commercial Intelligence, of London, England, commenting on the railway situation in Mexico, says:

In 1873 Mexico had 335 miles of railway. Over these went 723,834 passengers and 150,473 tons of freight, and the receipts were \$1,848,375. In 1900 there were 8,460 miles in operation; 10,709,462 passengers and 7,522,923 tons of freight were carried, and the receipts were \$49,425,478. Since 1900 the mileage, freight, number of passengers, etc., have gone on increasing. Better ballast, steel rails for iron, steel bridges for wooden, first-class rolling stock, etc., all mark the methods of the Mexican railroad management. In the face of almost insurmountable natural obstacles—up hills, over mountains, and climbing precipices—the roads have gone until the tale, when told, sounds almost incredible.

Improved Railway Freight Service in France.—During the past year there has been much pressure brought to bear on the French railroad companies to compel them to lower their rates so as to give the French manufacturers better and cheaper facilities in transportation, and as a result the through rates from Limoges to Havre, Antwerp, Boulogne, and other French seaports or frontiers have been considerably lowered and the service greatly accelerated. Practically an express service has been given for slow freight. Instead of taking twelve days to make the trip from Limoges to Antwerp, the journey is made in four. This has helped the exporters who make use of these ports. This advantage has, however, been counterbalanced, in a certain degree, by the higher rates for ocean freights that have been agreed upon by the steamship companies, which are much higher than they have been. This has not been satisfactory to the French shippers, who hoped to benefit by their labors with the French railroads.—*Walter T. Griffin, Commercial Agent, Limoges, France, October 28, 1903.*

Motor Service on Austrian Railways.—The Government has recently made arrangements for an experimental motor service on the so-called secondary railroad which connects Trieste with the town of Buje, in Istria. Experiments in this direction are also being made on a number of branch roads in lower Austria and Bohemia, and are being watched by the public with a great deal of interest. Local railroads in Austria have, generally speaking, been disappointments to both their owners and the patrons—to their owners, because they are not profitable; to the public, because their passenger service is insufficient. The railroad motor cars, which accommodate from 12 to 20 passengers, are expected to fill a long-felt want. They are comparatively light, carry no unnecessary incumbrances, and can be operated at a very small expense. They will make a number of regular trips daily and as many extra trips as the exigencies of the traffic may demand.—*Fredk. W. Hossfeld, Consul, Trieste, Austria, October 31, 1903.*

Overproduction of Staves.—The Trieste trade in lumber was light during the past year and there was scarcely any importation of foreign timber, owing chiefly to industrial stagnation. The only foreign imports worth mentioning were 1,464 tons of teak from India and 1,542 tons of pitch pine from the United States. The stave trade was greatly depressed. It is stated that 40,000,000 staves are awaiting consumption in France alone and that a sound condition of the market could be brought about only by a complete cessation of production, both in Europe and America, for a period of one year. As Austria-Hungary is the principal producer of staves the effects of the general overproduction are of course more keenly felt here than elsewhere.—*Fredk. W. Hossfeld, Consul, Trieste, Austria, October 31, 1903.*

Austrian Canal Improvements.—A paper was read by Engineer Anton Smrcek, Austrian professor, at the Congress for Internal Navigation held during September in Mannheim. He argued that the most advantageous and important connection of the Danube with the sea would be a continuation of the Vienna-Prerau Canal via Olmuetz, Steinberg, Loschitz, the Moravian and Bohemian Truebau, Wildenschwert, Chotzen, and Daschitz, in the direction of Pardubitz, and to the Elbe. The well-dredged and navigable Elbe, with its network of canals, would then serve as the connection with the port of Hamburg. The Pardubitz-Prerau-Cracow Canal, as part of the Austrian Midland Canal, the proposer considered, should be viewed as the backbone of the whole network of water

ways. In conclusion, the professor urged the systematic construction of the Austrian water ways, making use of the latest improvements and experience obtained in other countries. If this scheme were carried out it would be of great advantage to American shippers, owing to the cheaper freight rates by canal to Hamburg.—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 30, 1903.*

Canadian Shipping in 1902.—The American consul at Gaspé, under date of November 26, 1903, states that the total number of vessels in the register books of the Dominion of Canada on the 31st of December, 1902, was, including old and new vessels, sailing vessels, steamers, and barges, 6,863, measuring 652,612 tons register, being an increase of 44 vessels and a decrease of 11,870 tons register as compared with 1901. The value of the vessels is \$19,587,390. The number of new vessels built and registered in the Dominion of Canada the last year was 296, measuring 30,216 tons, at a value of \$1,359,720.

Nickel Deposits of Ontario.—United States Consul Henry S. Culver, of London, Canada, under date of December 8, 1903, forwards the following item concerning the nickel deposits of Ontario from the Canadian Manufacturer:

For some time past the government of Ontario has had under consideration the question of withdrawing from sale or lease all or part of the known unsold nickel lands in the Province and offering them to the Imperial Government to provide war material for the manufacture of armor plate and British guns. The order in council of November 11 withdrawing a belt of land 10 miles wide on each side of the Temiskaming and Northern Ontario Railway, so as to reserve the minerals, especially the nickel ores, is the first step toward making possible British ownership of the nickel of Ontario.

The nickel supply of the world is at the present time derived from two sources. The most important is the Sudbury district of this Province; the other, in New Caledonia, a French penal settlement or colony situated in the Southern Pacific Ocean, about four days' sail from Sydney, New South Wales. Consequently, among the great powers, France and Great Britain are at present the only ones possessing nickel to any appreciable extent for use in their respective armaments, and in modern armaments nickel is now indispensable and increasingly so. There is reason to believe that if the British imperial authorities fall in with Canada's desire to conserve the nickel of Ontario for imperial uses France will at once take similar steps in regard to the nickel supply from New Caledonia.

Canadian Trade.—The following is taken from the Canadian Manufacturer, of December 18, 1903:

The fact that our own manufacturers are not able to supply all the wants of our own people should not encourage them, dog-in-the-manger-like, to prevent or restrict the use of similar goods from other countries. There are some countries

which can produce certain lines of goods to much better advantage than some other countries, or even than ourselves, and the wants of the people for such goods should not be denied them. It is not in the interest of the people to deny them. If Great Britain can supply us with certain classes of goods on more favorable terms than other countries, our trade in such goods would naturally gravitate in that direction; but if she can not, why should we be prevented from trading elsewhere?

These remarks are induced by the anomalous conditions emphasized in the tabulated statement elsewhere presented in this journal wherein it is shown that in a selected list of 200 manufactured articles in strong demand for use and consumption by the people, Great Britain supplied us with less than 10 per cent and the United States with more than 83 per cent, all the rest of the world, including all British possessions, sending us the small balance of 7 per cent. Loyalty to the old flag is a good thing, but if the mother country does not, because she can not, supply a larger proportion of our requirements, it is not to be supposed that we are to be deprived of them, or that we are to be forced to pay unnecessarily exaggerated duties to obtain them.

Another remarkable feature of the anomaly is that in the list of 200 enumerated dutiable articles imported into Canada in 1903 there are 41 opposite the names of which is printed the suggestive word "none," indicating that Great Britain had failed to supply us with one dollar's worth, while the United States sent us, of the identical goods, to the value of \$4,897,660; and it will also be observed that in addition to the failure alluded to there are 51 other items not one of which our imports from Great Britain amounted in value to as much as \$1,000. The aggregate value of these 51 articles amounted to only \$15,763, while our imports of the identical goods from the United States amounted to \$5,276,734. These are startling facts, which should command attention.

Bubonic Plague and Epizooty in Mauritius.—Under date of December 8, 1903, United States Vice-Consul J. W. Hollway, of Port Louis, Mauritius, reports that the bubonic plague, which seemed to have been abating in the island, had, at the date of his writing, assumed an epidemic form of a virulent type. The number of cases of bubonic plague on the island in 1902 was 506, of which 386 died—a decrease, as compared with 1901, of 587 cases and 419 deaths. Of the "surrah," or epizooty, which broke out among the horses and cattle in 1902, he reports its sad havoc during the year 1903, it being estimated that three-fourths of the draft animals succumbed thereto, and that agriculture—especially the sugar plantations—suffered very severely, but owing to the substitution of mechanical for animal traction a calamity was averted. Mr. Hollway says that the common house fly is supposed to spread the distemper.

Sugar in Tahiti.—Pursuant to the ratification by the Government of France of the recommendations of the Brussels convention, the import tax on refined sugar has been reduced in this colony to 6 centimes per kilogram (1.16 cents per 2.2 pounds), reducing the duty

by 19 centimes (3.67 cents). The effect materially will be a stimulation of the sugar importation; while on the other hand it may prove disadvantageous to the Tahiti Commercial and Sugar Company, an American corporation, which has had a monopoly in the production of sugar in this section.—*William F. Doty, Consul, Tahiti, Society Islands, November 10, 1903.*

New System of Measuring Criminals.—The police of London have introduced experimentally a new measuring system for recognizing criminals. As it has been successful, it will soon be adopted by a number of other police departments both in England and abroad. In this system only the impressions of the fingers are taken. Compared with the "Bertillon" system, it has, above all, the advantage of simplicity, as it can be applied without any contrivances, and is, therefore, much less expensive. Whether it can completely take the place of the Bertillon system remains to be seen. The Berlin police have for the present also inaugurated a card collection of impressions of the fingers for recognition purposes. The new system is called "Daktyloscopy."—*Richard Guenther, Consul-General, Frankfort, Germany, December 15, 1903.*

Customs Tariff of Ecuador.—United States Consul-General H. R. Dietrich, of Guayaquil, Ecuador, has transmitted to the Department of Commerce and Labor a copy of the customs tariff of Ecuador, which is on file in the Bureau of Statistics, where it may be consulted. This tariff is the latest issued by Ecuador.

New Mining Law in Colombia.—Minister A. M. Beaupré, of Bogotá, Colombia, reports that Colombia has passed a new mining law, which is intended to develop the many gold, silver, and platinum mines of that country. It provides that a tax of \$10 be paid for each denunciation and \$50 for the concession title, paper money, and a scheme of annual taxation for working the same. All mining machinery going there will be admitted free of duty. An effort was made to amend the law so that all mines, including iron, copper, zinc, sulphur, and precious stones, could likewise be denounced and acquired by individuals, but it was defeated.

Production of Gold in South Africa.—According to a dispatch received at Berlin, the production of gold in November of 1903 of the mines in the Transvaal gold fields belonging to the mining

chamber of the Transvaal was 272,007 ounces, valued at \$5,624,876; that of the other mines, 7,706 ounces, valued at \$159,404; total, 279,813 ounces, valued at \$5,784,280, against 284,544 ounces, valued at \$5,881,987, in October. At the end of November the total number of men employed in the mines was 69,958.—*Richard Guenther, Consul-General, Frankfort, Germany, December 14, 1903.*

Sewerage and Draining of Mazatlan.—Señor Victor Patron, president of the Mazatlan Board of Trade, received a telegram on October 7 from Governor Francisco Canedo, of Sinaloa, confirming the contract with the Mexican Government, between Governor Canedo, for the State of Sinaloa and the city of Mazatlan, and William Astor Chanler, of New York City, who is represented in Mexico by Attorney Alfredo Chavero, of the City of Mexico, to furnish a complete system of sanitary sewerage and drainage for the city of Mazatlan. The price for work and material, as well as all conditions, are on the same basis as the contract now in force with the city of Tampico, where a like piece of improvement is now being constructed. For information as to subcontracts, furnishing material, and machinery, interested parties should apply to Alfredo Chavero, attorney, City of Mexico, or William Astor Chanler, New York City.—*Louis Kaiser, Consul, Mazatlan, Mexico, November 28, 1903.*

Lead Mines in Iviza.—Attempts are now being made to form a syndicate to resume the working of the argentiferous lead mines of the Compañia de Minas de Iviza. For centuries these mines have been known to exist in the little island of Iviza, one of the Balearic group. According to the mining engineers who have carefully examined the locality, the ore is to be found in abundant quantities, and the prospects are very favorable for any new undertaking with capital and modern machinery. The mines were originally discovered by the Romans, who extracted large quantities of mineral from them. It is said that a small company obtained a concession to work the mines and that it was able to make a profit of \$3,000,000 by the sale of the ore found at the mouth of the mine, left there by the first explorers. Recently the mine became flooded, owing to the borings having opened a spring at an elevation of 100 feet above the sea level, and I am told that work has been suspended in consequence ever since. The new company will have to pump the water out and, by tunneling, to arrange for an outlet for the spring, a matter offering no difficulty to modern appliances.—*Julius G. Lay, Consul-General, Barcelona, Spain, December 11, 1903.*

Foreign Trade in Manchuria.—For the last decade the foreign trade in Manchuria has advanced greatly. The last year of the decade exceeds the first year by 500 per cent. For 1902 the returns of customs collected were \$910,000. The growth of the trade came from the free export of beans, bean cake, and bean oil.—*Richard T. Greener, Commercial Agent, Vladivostock, Siberia, October 20, 1903.*

Koreans in Russian Gold Mines.—The Okhotsk Gold Mining Company has petitioned the military governor to keep foreign workmen during the winter, as there is a lack of Russians. The company was permitted to employ non-Russian subjects (Koreans), who, according to regulations, must be discharged at the end of the season. The petition was granted, and 800 Koreans are at the works. Other gold-mining companies have also made similar petitions, with the same results.—*Richard T. Greener, Commercial Agent, Vladivostock, Siberia, October 20, 1903.*

Public Schools in Russia.—According to the latest statistics there are 84,544 public schools in the Empire of Russia, out of which number 40,131 are under the jurisdiction of the Ministry of Public Education, 42,588 under the jurisdiction of the Holy Synod, and the remainder under other departments. Of the pupils, 73,167 were adults, 3,291,694 boys, and 1,203,902 girls. The teachers number 172,000. The maintenance of all these schools costs more than \$25,000,000. The average school tax for city schools is \$9.50 and for village schools \$5 per pupil.—*Samuel Smith, Consul, Moscow, Russia, January 2, 1904.*

Catalogues Wanted.—Under date of Niuchwang, China, November 27, 1903, received at the Department of Commerce and Labor on January 20, 1904, United States Consul H. B. Miller reports that the resident engineer in chief of the Chinese Eastern Railway, Impeno, Manchuria, desires catalogues of flour-mill, brewery, and tar-making machinery, which should be addressed to H. B. Miller, United States consul, Niuchwang, China.

Cost of Construction of the Trans-Siberian Railway.—The construction of the great Trans-Siberian Railway, comprising a length of 9,042 versts (5,995 miles), has cost 940,259,401 rubles (\$484,554,415), or an average of 103,987 rubles (\$53,553) per verst (\$81,326.84 per mile). The loss endured through the disorders

in China is estimated at 10,000,000 rubles (\$5,150,000). The Ministry of Ways and Means of Communication has found it necessary to enlarge the rolling stock of the fourth-class service to 7,000 cars, to be used for transportation of laborers, emigrants, and recruits.—*Samuel Smith, Consul, Moscow, Russia, January 2, 1904.*

Russian Railway Accidents.—The Russian Ministry of Ways and Communications states in its report that the number of accidents on Russian railroads amounted to 9,890 during the year 1902. There were 1,012 collisions of trains and 1,521 cases of derailment. The damage to the Government amounted to \$800,000. The number of persons who suffered from these railroad catastrophes was 9,517, of whom 1,529 were killed and 7,908 were wounded and crippled. Of passengers in the wrecked trains 103 were killed and 682 wounded. Of railroad employees 506 were killed and 2,053 wounded. Of persons who were neither passengers nor employees, but who happened to be near the accidents, 881 were killed and 2,053 wounded. Of employees in the workshops of the railroad and at the construction of buildings, 36 were killed and 4,231 wounded. The number of accidents average 12.32 for each million miles traveled—*Richard T. Greener, Commercial Agent, Vladivostock, Siberia, November 15, 1903.*

Russia's Cereal Crops of 1903.—According to statistics of the central statistical committee, the crop of cereals in the 72 governments and districts of European and Asiatic Russia is estimated at 2,196,907,700 poods (1,720,448,392 bushels), against 2,294,667,100 poods (1,832,590,755 bushels) in 1902, as follows:

Cereals.	1903.	1902.
	<i>Bushels.</i>	<i>Bushels.</i>
Wheat	413,305,837	369,034,932
Rye	19,717,457	13,982,336
Oats	710,143,540	827,771,637
Barley	371,994,623	353,189,263
Indian corn.....	50,670,514	48,497,400
Buckwheat.....	39,689,025	61,103,775
Millet	92,211,696	131,318,712
Pease	22,715,700	27,692,700
Total.....	1,720,448,392	1,832,590,755

The potato crop is estimated at 931,009,626 bushels, against 1,041,098,243 bushels in 1902.—*Samuel Smith, Consul, Moscow, Russia, January 2, 1904.*

Silk Culture in Russia.—The Russian Ministry of Finance has just published an interesting description of the Russian silk industry. The yield is not very great, hardly exceeding during the last few years 16 tons of dried cocoons, representing a value of from 30,000 to 40,000 rubles (\$15,400 to \$20,600). A Moscow mill buys up the greater part of the supply. A small part is worked up locally, but the small local factories are gradually losing ground in their competition against the big mills. The production of the Caucasus amounted, during the last few years, to about 2,539 tons of dried cocoons. Kutais and Elizavetpol are the governments in which sericulture has progressed best. In the towns of Nucha and Schuscha there are about fifty factories, which consume the whole cocoon supply of the eastern part of Transcaucasia. There is, therefore, no export of cocoons from this district. Although no reliable statistics are available regarding the cocoon of central Asia, it is estimated at about 2,179 tons, of a value of about 5,000,000 rubles (\$2,575,000).—*Oliver J. D. Hughes, Consul-General, Coburg, Germany, November 30, 1903.*

Russian Crop of Winter Cereals in 1903.—According to figures just published by the Russian statistical bureau, the combined yield of winter wheat and rye in 1903 amounted to 1,064,226,280 bushels, showing an average increase of 83,355,394 bushels for the last five years, but a decrease of 35,392,343 bushels as compared with the yield of 1902. The net amount, after deduction of the quantity necessary for sowing, is 875,930,916 bushels, which makes 6.94 bushels per person, against 7.35 bushels for 1902. The total yield of winter rye amounts to 857,819,042 bushels and winter wheat 204,407,238 bushels, which makes an average of 5.56 bushels of rye and 1.39 bushels of wheat per person, against 5.76 bushels and 1.59 bushels, respectively, in 1902. The crop of rye is classified as follows: The best yield was in the Volga Provinces, which amounted to 175.6 per cent as compared with the average yield during the last five years; the steppe Provinces, 165.6 per cent; the Siberian Provinces, 144.4 per cent; and the new Russian Provinces, 127.3 per cent. The yield was bad in the lake and industrial Provinces, amounting to 59.8 per cent and 83.9 per cent, respectively, of the average yield for the last five years. The best yield of winter wheat was in the Ural Provinces, amounting to 185.9 per cent; the Volga Provinces, 176.4 per cent; and the new Russian Provinces, 141.3 per cent. The yield was bad in the lake Provinces, being 60.4 per cent, and in the industrial Provinces, 81.4 per cent, of the average yield for the last five years. The yield of straw is estimated at 48,139,572 tons, which makes 80.5 per cent of rye straw and 81.5 per cent of

wheat straw per 2.7 acres. The yield of hay was 16,370,070 tons, or 0.63 ton per acre, from meadows overflowed with water, and 39,813,651 tons, 0.56 ton per acre, from meadows not overflowed with water.—*Ethelbert Watts, Consul-General. St. Petersburg, Russia, December 5, 1903.*

Decrease of Production of Sherry Wine in Spain.—The production of sherry wine is confined to the district of Jerez. Since 1890 the vintage has decreased so enormously that unless the new vineyards planted with American vines in the last few years shall be a success in the growth of grapes, the existence of this great industry is near its end. In 1890 there were produced 6,000,000 gallons in the district of Jerez. The vintage has fallen off from year to year, until the product of 1903 only amounted to 445,848 gallons.—*M. M. Price, Commercial Agent, Jerez de la Frontera, Spain, November 17, 1903.*

Sheffield's Garbage Crematories.—United States Consul C. N. Daniels, of Sheffield, England, sends an article from the Sheffield Daily Telegraph in relation to the disposition of the refuse matter of that city, from which the following is an extract:

In a few days Sheffield will have two refuse destructors at work, and one more step will have been taken toward solving that most difficult problem of how to deal with the refuse of a great city. The objection to anything new, however, has been a serious obstacle to progress in the matter of sanitary reform. Especially has this been so with regard to the erection of destructors. To take them right outside a great city like Sheffield means serious cost in haulage, and to put them in the center of the population at once arouses fierce opposition, as was recently instanced by the proposal to place one at Primrose Meadows to deal with the refuse of the Abbeydale, Sharrow, and Heeley districts. "We want more destructors; they are a grand thing," say these people, "but don't put one anywhere near us."

Among the more uncommon articles cremated in the older destructor during the year were 2,339 mattresses, 123 beds, 50 pillows, 872 dogs, 41 pigs, 12 cats, and nearly 200 tons of fish.

The work done by the Lumley street destructor will give an idea of what may be expected of the new one in Penistone road. The latter contains 12 cells, each capable of cremating 10 tons per day. The force blast will be steam, which will tend to create a higher temperature, but in order that no possible chance of nuisance may arise a centrifugal dust catcher will be placed between the boilers and chimney. By this means all chance of dust escaping into the atmosphere and risk of nuisance is entirely obviated.

The cost of the whole, including the approaches, has been about \$146,000. The clinker, or residue, from the destructor is made up into concrete flags, mortar, and cement. The cost of working is estimated to be about 24 cents for each ton of refuse cremated.

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VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins (not including rates of exchange), as given by the Director of the United States Mint and published by the Secretary of the Treasury:

COUNTRIES WITH FIXED CURRENCIES.

Country.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic..	Gold and silver..	Peso.....	\$0.96,5	Gold—argentine (\$4.82,4) and ½ argentine; silver—peso and divisions.
Austria-Hungary.....	Gold	Crown.....	.20,3	Gold—20 crowns (\$4.05,2) and 10 crowns.
Belgium.....	Gold and silver..	Franc .....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil	Gold	Milreis .....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British N. A. (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do .....	.....do	1.00	
Chile.....	.....do	Peso.....	.36,5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.
Cuba	Gold and silver..	Peso.....	.92,6	Gold—doubloon (\$5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Ecuador.....	.....do	Sucre.....	.48,7	Gold—10 sucres (\$4.8665); silver—sucre and divisions.
Egypt.....	.....do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland .....	.....do	Mark.....	.19,3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France	Gold and silver..	Franc .....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling..	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti .....	.....do	Gourde.....	.96,5	Silver—gourde.
India	Gold	Rupee.....	.32,4	Gold—sovereign (\$4.8665); silver—rupee and divisions.
Italy	Gold and silver..	Lira .....	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan	Gold	Yen .....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia .....	.....do	Dollar.....	1.00	
Netherlands.....	Gold and silver..	Florin .....	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—\$2 (\$2.02,7).
Peru.....	.....do	Sol .....	.48,7	Gold—libra (\$4.8665); silver—sol and divisions.
Portugal .....	.....do	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia.....	.....do	Ruble .....	.51,5	Gold—imperial (\$7.718) and ½ imperial (\$3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc .....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster .....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay .....	.....do	Peso.....	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES.

Country and monetary unit.	Jan. 1, 1903.	Apr. 1, 1903.	July 1, 1903.	Oct. 1, 1903.	Country and monetary unit.	Jan. 1, 1903.	April 1, 1903.	July 1, 1903.	Oct. 1, 1903.
Bolivia:	Cts.	Cts.	Cts.	Cts.	China—Continued.	Cts.	Cts.	Cts.	Cts.
Silver boliviano.....	36.1	35.2	38.4	40.8	Ningpo tael.....	56.1	54.8	58.3	63.4
Central America:					Niuchwang tael.....	53.3	53.4	59.8	61.8
Silver peso.....	36.1	35.2	38.4	40.8	Peking tael.....	.....	.....	.....	64.3
China:					Shanghai tael.....	53.9	52	56.8	60.2
Amoy tael.....	58.4	57	62.2	65.9	Swatow tael.....	58.8	52.6	57.5	60.9
Canton tael.....	58.2	56.8	62	65.7	Takao tael.....	56.6	57.3	62.6	66.3
Chefoo tael.....	55.8	54.5	59.5	63	Tientsin tael.....	60.1	55.2	60.3	63.9
Chinkiang tael.....	57	55.7	60.7	64.4	Colombia:				
Fuchau tael.....	54	52.7	57.5	61	Silver peso.....	36.1	35.2	38.4	40.8
Haikwan tael.....	59.4	58	63.3	67.1	Mexico:				
Hankau tael.....	54.6	53.3	58.2	61.7	Silver dollar.....	39.2	38.3	41.8	44.3
Hongkong tael.....	(*)	(*)	(*)	(*)	Persia:				
Nankin tael.....	.....	.....	.....	65.2	Silver kran.....	6.6	6.5	7.1	7.5

* The "British dollar" has the same legal value as the Mexican dollar in Hongkong, the Straits Settlements, and Labuan.

